BUSINESS

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THE EDITOR'S CORNER

WHAT'S your secret?" I recently asked the president of a rather large manufacturing company, referring to his organization's long record of harmonious labor relations and a work force with a name for craftsmanship as well as for productivity. The employees had turned down several invitations to join a labor union.

"There's no secret, and it certainly isn't money, although we do pay pretty well. We do things to make our employees identify themselves with the company and feel that they are appreciated, which they are. Maybe 'thoughtfulness' is the best single word to describe our approach. For example, 10 years before we built this new plant here on the outskirts of the city we announced our plans to the employees and told them where the site was. This reduced the wrench of relocating; in fact, by the time we did move, many of our employees had already bought or built homes in the neighborhood.

"It takes time, as I tried to explain to a friend of mine who called me rather frantically a few years ago. He runs a company that has about 1,000 workers; and the day he called, he fairly gasped, 'The union is trying to organize me! What should I do?'

"Nothing," I of course replied. "You win or lose, not according to anything you can do now but according to what you did yesterday, last year, and all the years before that. Better just sit back and hope that you have lived right."

Next Month's Feature

This real-life story provides an appropriate prologue to a bit of news about the lead story next month, "Danger Ahead: The Unions Will Organize Your White-Collar Employees If You Don't Watch Out!" It was written by Dr. Robert N. McMurry, the psychologist; and John Sullivan, who is an attorney specializing in labor problems and is on the staff of Dr. McMurry's consulting firm.

It certainly is no news that the white-collar work force constitutes the last frontier for the American labor movement. In fact, the cry of warning has been sounded so frequently and fervently that it has begun to lose the power to arouse, in the manner of "wolf, wolf." The August 1957 issue of *Harper's* contained an article by a discouraged (and anonymous) organizer explaining, "Why White-Collar Workers Can't Be Organized."

Labor's Recruiting Drives

Dr. McMurry and Lawyer Sullivan don't spend much time on the history of labor's unsuccessful recruiting campaigns among clerical and semiprofessional workers. After proving that "white-collar workers today have very good reason to look with considerable interest upon unionization," they examine the reasons why white-collar workers resist unionization . . . dreams of being an "executive," fears of losing status, dread of being involved in a strike, and the bad press recently received by the big internationals.

The McMurry-Sullivan thesis is that management has been the beneficiary of a handsome windfall. They supply some new and impressive evidence that indicates this harvest is going to thin out. The member of management who can do most to hasten that process is what the authors call the "typical weak autocratic supervisor."

They have compiled a list of 18 characteristics of such a supervisor. It is, as the ads proclaim, "suitable for framing." In fact, it deserves framing.

When you've finished the article, you'll have a better idea of whether you're living right and what to do if you aren't.

Charles F. Johnson

P.S. AMERICAN BUSINESS and Dartnell will have space 210-C on the main floor of the Coliseum during the 1959 National Business Show in New York City October 19 through 23. Ed Ryan and I will be there, along with several other members of the crew. Please drop in for a visit, those of you who can.

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LETTERS FROM READERS

More Anti-Pest Techniques

Nicholas Bayard's amusing and useful article, "How to Get Rid of a Pest," in your September issue, reminded me of a factory manager I once knew. By accident he learned that if the huge steam turbine in the power plant turned at a certain r.p.m., it set off vibrations that fairly shook his office to pieces. Windows would rattle, chairs chatter, and the ashtray and other objects on his desk would bounce wildly about.

When a visitor had overstayed his leave, the factory manager would call the power-plant superintendent and give a prearranged signal. Soon the vibrations would be felt. It was a rare visitor who wouldn't promptly depart, quite sure that the office was being hexed and haunted by a poltergeist.

And then there is Elliott White Springs, who reportedly has a desk in his office at Fort Mill, S. C., equipped with a remote control device similar to those used to change channels and tune in television receivers. When Col. Springs wishes to be rid of a visitor, he presses a button. This activates an electric motor under the seat being occupied by the no-longer-welcome guest. The chair starts to joggle, then jounce excitedly, giving the occupant—as I understand it—the rather distinct impression that he is riding down a corduroy road in a truck with solid rubber tires and no springs whatsoever.—ROBERT HATCH, *bureau manager, Carl Byoir & Associates, San Francisco, Calif.*

AMERICAN BUSINESS in India

I am a regular user of the United States Information Service Library at Madras and during my last visit there I came across your magazine, full of practical ideas. Whilst going through the February 1959 issue, I read with interest the article by Harold M. Altshul, "Planning, Imagination, and Follow-Through Make Management Conferences Fruitful."

It occurred to me that you and your readers might be interested to know that we in India have meetings galore, too, and that we made good use of Mr. Altshul's article.

In this government-owned railroad-coach factory, which now employs nearly 7,000 men, a number of meetings have to be called for control and decision-making purposes. As secretary to the chief administrative officer, it falls to my lot to arrange these meetings. I have adopted several of the techniques developed by Mr. Altshul—preparing advance material, sharpening the art of listening, doing preconference homework, and others. All are working well for us.

I have also made use of many other AMERICAN BUSINESS articles—"Five Points to Remember When Selling Ideas to a Group," and "Seven Ways to Pep Up Business Meetings." Thus, the United States Information Service Library has been the medium through which management in our organization has been improved and the number and duration of business meetings reduced.—K. SANTHANAM, *Indian Railways Integral Coach Factory, Perambur, Madras, India.*

Paperwork Conveyor System

The front cover of the special report you published in 1951, "101 Ways to Cut Office Costs," contained a large picture of a paperwork conveyor system used by the order department of the Peoples Gas, Light and Coke Company in Chicago. The conveying system conveyed paper through the order department to a basket at the end of the line.

Can you tell us who manufactured this conveying system?—W. N. FRANCIS, *general manager, Carey Machinery and Supply Company, Baltimore, Md.*

Because we frequently receive letters asking for this information, we publish the answer here. This conveying system was designed and constructed by the Samuel Olson Mfg. Co., 2418 W. Bloomingdale Ave., Chicago 47, Ill.

Ideas for Everyone

The September 1956 issue of AMERICAN BUSINESS contains an article by me entitled, "I've Got an Idea," dealing with the problem of working with "outside" inventors.

Would you have any objection to my including an adaptation of this article in a book I am now preparing? There would of course be an acknowledgment to AMERICAN BUSINESS in the book's introduction.—GEORGE M. NAIMARK, Ph.D., *director, scientific services, White Laboratories, Kenilworth, New Jersey.*

Delighted! Best wishes with the book. Two other AMERICAN BUSINESS writers are compiling books based on the articles in this magazine. Frank Kleiler's series of services to businessmen available from the Federal Government will appear in book form, as will Ray Brown's articles on the art of administration, one of which appears in this issue.

Tips on Business Giving

The Business Goodwill Advisory Council, a group recently formed by sales managers interested in clearing the air on the subject of business gift giving, has taken the first significant step in this direction.

In a folder entitled "Business Gifts at Christmas—Good or Bad?" the new organization sets forth seven basic "Keys to Success" in the selection and distribution of business gifts. The rules developed by BGAC are:

1. Keep your gifts of modest value in relation to the importance of each recipient as an employee, prospect, or customer. Extravagant gifts smack of bribery.

2. Choose your gifts individually, considering the tastes of each group of recipients or, preferably, of each individual recipient.

3. Choose only high-quality gifts that are useful, durable, and dependable.

4. Personalize each gift, if possible, with the recipient's name or initials.

5. Package each gift attractively and securely.

6. Accompany each package with a personal note, greeting card, or at least a special gift label.

7. Deliver each gift with a flair, if possible—personally or by special messenger—and preferably to each recipient's home rather than to his office.

BGAC makes a strong point of the fact that "as a result of occasional abuses . . . some businessmen have made the mistake of forbidding their employees to accept business remembrances before realizing that such a public statement bares basic mistrust of the employees and inevitably results in very poor employee and public relations."

Business Giving on Upswing

On the other side, BGAC points out, detailed surveys have shown that "business giving is generally on the upswing; that the practice is definitely worth while, but it *does* depend on how it is done."

"The giving of *well chosen* remembrances can be a highly rewarding practice," the survey concludes. "Goodwill generates easily and it generates best when the remembrance is presented in a truly thoughtful manner as an honest token of appreciation."

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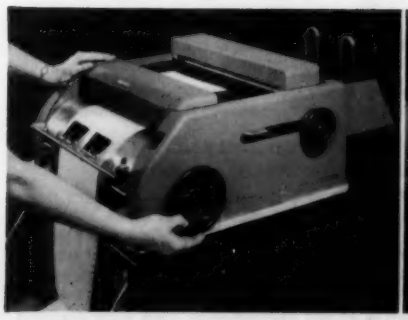

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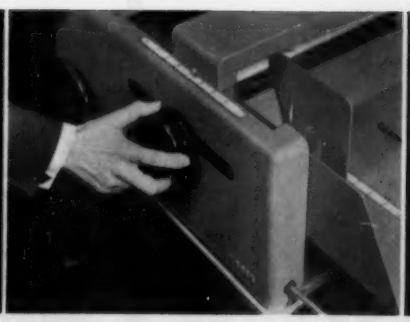

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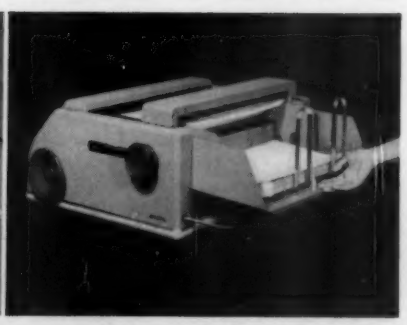

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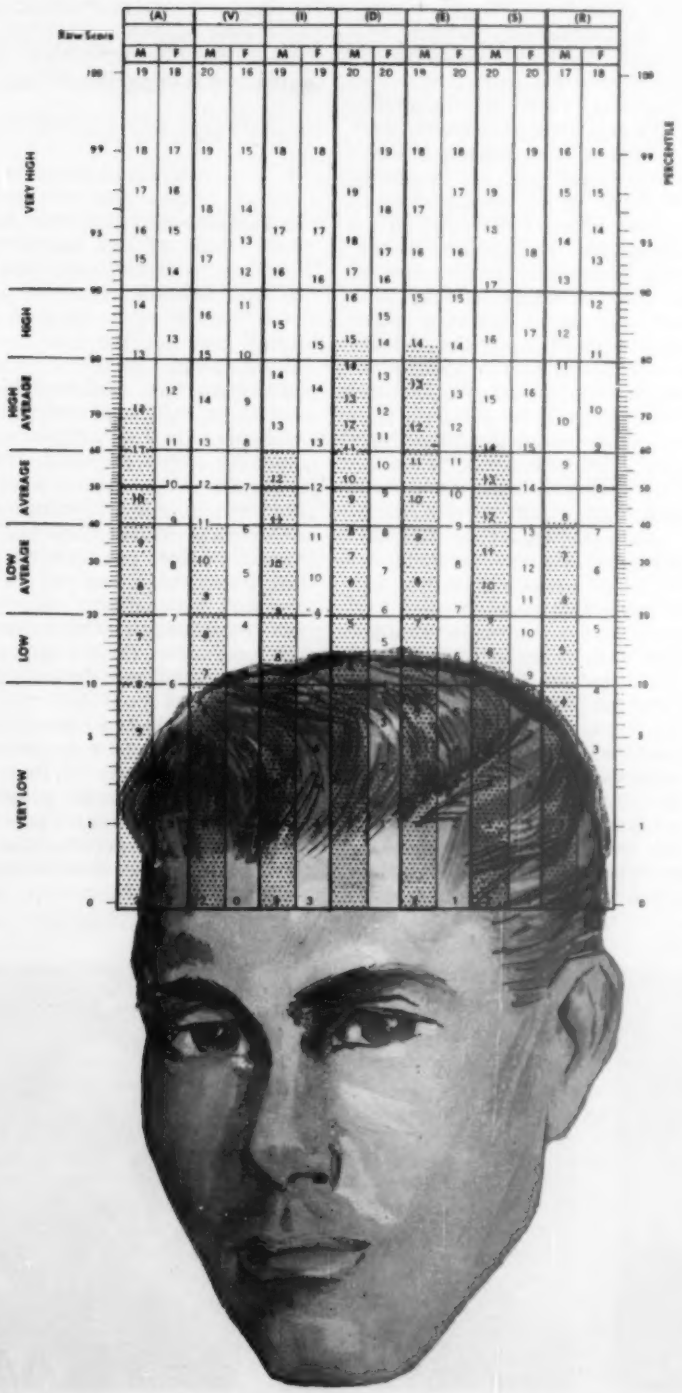


BY *Lyle M. Spencer*
President
Science Research Associates, Inc.

BY now, nearly every corporation executive is familiar with the tests used to weed out the crabgrass from the Merion blue among potential employees. Indeed, the psychologists who developed these tests in their laboratories never expected their science to be embraced so ardently by businessmen. The old-fashioned boss, after all, had strong notions about the men and women he wanted to hire. "The most valuable ability of all," old Jonathan Ogden Armour, Chicago's meat-packing titan, proclaimed in the 1890's, "is the ability to select men of ability."

Some executives, therefore, have devised elaborate techniques for picking job applicants in the traditional face-to-face meeting. The interview contrived by Vice-Admiral Hyman G. Rickover, for example, is as harrowing as any Hindu ordeal by fire. The moment of truth arrives for a young Navy officer when—seated in a special chair with its front legs trimmed shorter than the rear ones, his eyes blinded by the sun's rays focused through Venetian blinds—he confronts Admiral Rickover. Then the "father of atomic submarines" fires a tricky salvo like this one:

"Suppose you're on a sinking ship with five other men. The conditions are that one, and only one, of you can be saved. Are you resourceful enough to talk the others into letting you be the man to survive?" As soon as the applicant sputters "Yes, sir," Rickover summons five men into the room and pipes: "All right, son, start talking."

While Rickover is certain he has succeeded in separating the dull, orthodox thinkers from the clever crackajacks by this method, there are some interviews—which are

rigorous tests in themselves, no matter how formal or bizarre—which fall short.

One famous early experiment, conducted in 1916, sought to learn how well a batch of businessmen could judge job hunters from across a desk. The interviewers were 23 experienced men, mostly sales managers who hired salesmen all the time. Each manager quizzed and rated the same 24 applicants. The results were almost as helter-skelter as if the names had been jotted on slips of paper and churned by an electric fan. No single applicant was ranked first by more than three of the 23 interviewers. One man was rated first by one manager, but sixteenth, nineteenth, and twenty-second by others.

Some Study Faces

The search for methods to find uncommon talent has led some executives to use a test of abilities as revealed in facial appearances—the Merton System. John R. Bangs, industrial and personnel relations director of The Budd Co. in Philadelphia, for instance, claims that he can spot personality traits in the faces of men—in the jutting chin, the drooping eyelid, or any combination of the 108 different facial bulges, curves, and ridges the late Holmes Whittier Merton charted into a scheme for picking executives. Today there are some 2,000 Mertonians scattered across the country, most of whom consider the system a canny way of gauging that elusive quality known as "executive drive." But most of them also, like Bangs, employ more usual personnel techniques like interviewing and performance records—as well as psychological tests.

Testing has come a long way since Alfred Binet, working at the Sorbonne in Paris, administered the first intelligence test to school children in 1905. Today there are tests for practically everything the human body can perform or the mind conceive.

Besides tests of mental aptitude or intelligence, which are known to Americans by the cryptic initials I.Q., there are tests of achievement, measurements of how much a person has learned, and of personality, to help uncover drives and ambitions as well as such temperament traits as stability and impulsiveness, introversion and extroversion, vigor and apathy. There are tests for physical skills like manual dexterity and finger dexterity, for such talents as mechanical aptitude and musical aptitude, for opinions and interests in job conditions and home conditions.

Schools and colleges use tests for such purposes as admissions, ability groupings, scholarship awards, and career planning. The military services use them to find radar operators, clerk-typists, submariners, and aircraft pilots. During World War II, for instance, Dr. John C. Flanagan, now at the University of Pittsburgh, directed a huge team of psychologists to cull the square pegs from the Air Force long before it invested the $25,000 required to train one of them to fly. In follow-up control studies, he found the testing program paid for itself many times over in smaller training costs alone, to say nothing of the disastrous crack-ups that were averted and the defeats turned into victories.

Atomic scientists today are urging exhaustive psychological tests on the pilots who man Strategic Air Command craft armed with nuclear devices. They reason that a pilot who suddenly goes berserk or gets a whim to drop an atomic bomb might plunge the world into a holocaust.

Business firms have found that some tests are useful to select the people they will hire and to assist officials in making crucial decisions on promotions, reassignments, and shelvings. Tests, company executives have discovered, often yield promising, sometimes canny clues to the capabilities, interests, and personalities of managers and workers; moreover, they help cut the big costs of miscalculating a candidate's qualifications—of hiring him when he shouldn't be hired or placing him in the wrong job.

"Right" Man for Job

It is a rare organization which attempts to pop men and women into neat, square pigeonholes solely on the basis of test scores—even though, on occasion, managers and personnel officials are under great stress and strain to pinpoint the "right" man for the job.

Increasingly, articulate arguments have been launched against the alleged "blight of testomania." Following at some distance the perorations of William H. Whyte, Jr., in *The Organization Man,* another writer, Alan Harrington, in an exercise called *Life in the Crystal Palace,* has labeled company interviewers and testers "the sorcerer's apprentices," who must each "earn his salary by adding his own modest but shrewd appraisal" of the job applicant. Indeed, if the recent glut of published material on the subject is any indication, all Americans must be compassionate to tears at the fate of their colleagues whose minds are poked and probed by the devices of psychologists and whose personalities are matched against cardboard cutouts.

Crawford H. Greenewalt, presi-

The use of psychological testing to select and promote employees has come under a good deal of fire recently. Tests have been termed unwarranted intrusions into private lives and a means to nip the ingenuity of potential Thomas Edisons and Henry Fords. Giving an able rebuttal to these charges is Lyle M. Spencer (shown at bottom of facing page), a Phi Beta Kappa graduate of the University of Washington. Mr. Spencer earned his master's degree in sociology there in 1935 and has been president of Science Research Associates since he founded that organization in 1938

dent of Du Pont, has observed in his little book, *The Uncommon Man,* that tests "assume a standard or a personality pattern against which candidates can be calibrated, and a set job or specifications which tend to give a fixed rigid image of the nominee. I don't like these assumptions, nor do I like precise job descriptions." Although Greenewalt recognizes that physicians, accountants, barbers, and even boiler engineers in most states must pass the tests of licensing authorities before they can practice, he denies that tests can be found to winnow the qualities of executive performance. "We must rely in large measure on intuition and hope and pray that our candidate's performance will reflect our wisdom rather than our incompetence," he has written.

In rebuttal to these criticisms of tests and of testers, the psychologists reply: People will continue to confound all efforts to classify them with the accuracy or speed of an IBM sorter.

Predict "Brave New World"

Any rigid, mechanized brave new world of punched cards and pigeonholes, such as those demoniacally described by three Englishmen, Aldous Huxley, George Orwell, and, now, Michael Young, is abhorred by Americans. Young, for instance, in *The Rise of the Meritocracy,* envisions a 21st century in which teachers also work for corporations as talent scouts of promising pupils, and in which people must reconcile themselves to lesser jobs when their senses and skills begin to wane—"the managing director had to become an office mechanic . . . the professor an assistant in the library."

That this bugaboo of a new serfdom of testing strikes terror in the hearts and minds of many is real enough. It is hostile to the traditional belief in the Protestant Ethic—that by persistent pursuit of hard work, ambition, self-reliance, thrift, and competition, an individual can succeed. From Ben Franklin to Norman Vincent Peale, the belief in self-improvement has flourished. It also is opposed to the Nation's baseball culture—that if a person steals second base, it's commendable and, as a corollary, if he can bluff his way into a job, it's admirable. Tests, some say, would have imprisoned the dreams of a Thomas Edison or a Henry Ford in our day.

This is nonsense. The facts of the matter are these:

Tests are not an unwarranted intrusion on private lives or a mechanism to nip the ingenuity of innovators. Our company, Science Research Associates, just last month published a test, devised by Dr. Morris Stein of the University of Chicago, that aims to help industry select the most creative scientists and engineers.

Tests, then, seek to measure *individuality,* for psychologists know that people have differing abilities, interests, and personalities. Thus, a study of students who had selected their careers on the basis of psychologically sound vocational guidance, founded mainly on tests, once showed that 28 had succeeded for every one person who failed. For a similar group not given guidance, the ratio of success to failure was only 50-50.

The management consulting firm of Booz, Allen & Hamilton once used a battery of tests to determine the promotability of 1,427 executives in 25 companies, varying in sales volume from $10 million to more than $1 billion a year. The findings: 35 percent were promotable, 54 percent were satisfactory in their present jobs, and the remaining 11 percent were considered unpromotable.

Whether the consulting company's report was used is not known, but in this instance tests had helped ferret out individual potentialities.

Tests Give Second Chance

Histories of people whose feeble scholastic or work records had stymied their chances for success are familiar to almost everyone. Often tests may provide the first glimmering that an injustice has been done. Consider the case of the ex-basketball star who dribbled his way through college with a low C average and, after a series of unfortunate job choices, wound up at a menial post in a large midwest retail chain. When a battery of tests revealed his promise, he was boosted up the managerial ladder through successive steps of responsibility until he now heads the company's eastern territory.

Undoubtedly, this executive will favor tests forever, viewing them as uncanny predictors of Wonder Men. Reliable professional psychologists avoid glittering claims that tests are panaceas for all selection problems. Sometimes the scientist must pooh-pooh the resounding hurrahs shouted his way by the boss.

Something like this occurred a few years ago when W. Harold Rea, the president of Canadian Oil Companies, Ltd., addressed Toronto's National Sales Executives Club.

Rea told of a company whose president called in a psychologist one day to examine all the top men, including the president. After the psychologist had administered a battery of aptitude and personality tests and had interviewed all the executives in depth, he reported bluntly that the president was the chief source of the firm's difficulties—he was a worrier and a penny pincher, far too indecisive and unwilling to delegate authority. Crestfallen, the president thought of retiring, but he was persuaded to stay on if he could redefine the jobs of the other executives. When this was done, the others took a renewed interest in their work and the president steered clear of day-to-day details. Company sales and profits improved sharply. At the end of his speech, Rea said, "The company I have been talking about is my own. The chief executive I have been talking about was your speaker."

Not all businessmen who have used tests are so frank as Rea, and the results are not always so spectacular. Nevertheless, in business and industry the use of tests is on the rise. In a nationwide survey of 852 companies taken in 1957, the Bureau of Business Research of the University of Texas found that 80 percent were using some sort of test to measure the capabilities of their job applicants. Ten years earlier the same researchers discovered only 57 percent of these companies were devoted to testing. The number of business clients at our company now totals some 11,000, three times as many as in 1949.

Two Reasons for Test Use

Behind these impressive statistics are two major reasons for the extensive use of tests.

First, the need for specialized brain power has accelerated to keep pace with the scientific, cultural, and technological advances made since World War II. To stay competitive, businesses now require larger cadres of competent managers, supervisors, and specialists than ever before. Thus, between 1947 and 1957, while nonproduction workers increased 52 percent throughout the Nation, production employees went up by only 1 percent. Of equal significance is a recent study by Dr. Frederick Harbison of Princeton which showed an average increase of 32 percent in the executive and supervisory ranks in two-thirds of the companies he studied since 1947.

As a result, industrial executives like John L. McCaffrey, chairman of International Harvester, recognize that the boss "is like a man confronted by an enormous tool bench who hopes he can pick the right screw-driver for a particular job." The forward-looking corporation head, wrestling with crucial manpower decisions, welcomes yardsticks for the measurement of employee qualities—even though the ability and personality calculator may be less than perfect.

"Psychology," says Herman W. Steinkraus, chairman of the Bridgeport Brass Co. and former president of the U. S. Chamber of Commerce, "is strengthening executive performance by bringing deeper insights into the human factors in the decision-making process."

Second, as the awesome need for brainy employees has burgeoned, the cost of finding and training this talent has multiplied. Esso Research and Engineering, for example, reported it cost $1,600 for interviews at colleges and factories last year to hire one technical man. IBM reckons it spends between $8,000 and $10,000 on a computer salesman before he calls on his first customer. In the Midwest, one company official complained: "We had a 20 percent turnover last year in the crop of college lads we hired. That doesn't tell the half of it. The 20 percent who left were among the very best boys. All the mediocre men stayed. We will need better screening from now on."

Executives want to minimize the element of risk in the choice of employees, especially for top spots. Today it is an iron economic imperative to eliminate mistakes in selection and placement. This is one of the big reasons for the growth of testing.

Following the war, to cite a case in point, Sears Roebuck began using tests to fatten its batting average for the hiring and promoting of employees at all levels. Sears psychologists studied 199 men who had been promoted to supervisory jobs, but whose test grades had not been used in advancing their status. Five years after these men were tested, the company psychologists hauled the test scores from locked files to find a remarkable correlation between the test grades and the job performances. One Sears psychologist, in fact, offered this conclusion on the study: "Predictions of a given division manager's eventual promotion or nonpromotion solely on the basis of test results can be expected to be correct 67 percent of the time."

Even the best tests, however, may be misused. Ornery executives may abuse tests just as easily as they may stifle the free give-and-take of job interviews. Some presidents and personnel officers have become so intrigued by the idea of spotting the brightest people in a group of candidates with a 20-minute test that they have made grievous mistakes. Tests are successful only when they are used as they are supposed to be used—by trained psychologists.

Example of Abusive Use

An example of the abusive application of tests happened in 1956 when the Greyhound Lines got a new president to cope with its sagging bus income. Plagued by falling sales, which showed a $20 million plunge in just two years, the president promptly decided to prune his payroll. Every man below him was given a series of tests, and those who did not cut the mustard mixed by the boss were fired. Nearly 700 people, including two vice-presidents, were lopped, regardless of their experience, supervisory skills, or special talents. The president admitted he had "a distasteful job to do," and he succeeded in putting the blame squarely on the tests instead of where it should have lodged—on himself. A year and a half later he himself was looking for a job.

Too frequently, tests are used as an excuse by executives who are too weak to reveal their real intentions—whether it's to sweep out some workers or promote only certain favorites. Fortunately for these bosses, tests are secret, impersonal, and objective—even when some executives are not.

In companies where tests are used properly, management and workers generally agree that the entire selection and placement procedure takes on a more thorough, systematic, and democratic tone. In short, the objectivity of tests forces fairness in using other selection measurements. As Dr. G. Roy Fugal of General Electric has noted: "Tests are only one of several tools for choosing and placing people. We still depend largely upon such conventional devices as reference checks, past performance, careful interviews, and so forth. But tests may sharpen and point up decisions. They are more than just short cuts to make executive selection easy." . . . END

HOW TO COLLECT

INTERPRET

AND USE

Information About Your Competitors

The subject of competitive intelligence in business was examined by nine students at the Graduate School of Business Administration at Harvard University. The results of their survey, as reported in the accompanying article, have been published in a book entitled *Competitive Intelligence*. C. I. Associates, 25 George St., Watertown, Mass. 78 pp. $10.00

WHAT should an executive know about his competitors? How should he gather this information? Three typical responses by businessmen to these questions were:

"Checking on competitors is vital to a business. Any means used in collecting information within the law and within the limits of common morality is part of the game."

"Collecting competitive information is unethical only when illegal or immoral methods are used; i.e., misrepresentation, fraud, bribery, burglary, or theft."

"Spying is spying and, except in time of war, honest folk don't spy."

Despite this wide range of attitudes concerning competitive intelligence, definite programs for this purpose were found in several companies; and informal methods of gathering information were used by most. By far the greatest amount of this information is collected through "aboveboard" methods, such as salesmen's reports or the analysis of published sources of information. Of the 200 executives responding to the question on business espionage, however, 27 percent stated that spying or other types of undercover information collection had recently been discovered in their industry. One-fifth of these thought that this activity was increasing.

The survey indicated that the greatest amount of information about competitors was collected through personal contacts of company personnel with other indus-

try representatives. Of these personal contacts, salesmen were the most useful in developing information. Although most salesmen gather competitive information as part of their selling duties, some companies have "salesmen" whose only job is information gathering. One large firm reported having 16 former salesmen stationed throughout the country for the sole purpose of developing sources that will supply competitive information.

Salesmen use a variety of channels in collecting information about competitors; one of the most widely used channels is customers who also buy from a company's competitors. These customers sometimes are willing to discuss competitors' operations in order to obtain concessions on prices, delivery schedules, and priorities. Salesmen also collect information through contacts with sales personnel from competing organizations. One tire and rubber company sends its dealer salesmen to competitors' sales meetings to report back valuable information.

There are two important types of competitive data which salesmen collect. The companies responding to the questionnaire indicated that information about competitors' pricing schedules and new and existing products were the most valuable. Generally, information from salesmen is an important determinant only in a company's short-term tactics. Being aware of competitors' prices, products, or point-of-sale promotions, though, is certainly valuable to a company so that it may meet changing conditions.

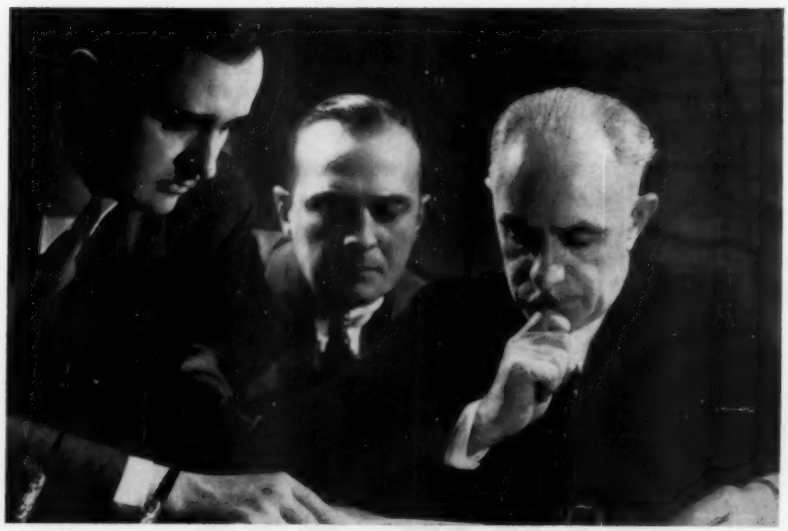
Counterparts Provide Data

The second most useful source of information reported in the survey was the personal contact of technical personnel or corporate executives with their competitive counterparts. Information exchanged at this level was considered very reliable. The primary channels of information exchange between counterparts are either through direct contact or through conventions, seminars, and other industry meetings.

In retailing, for example, the most useful day-to-day information gatherers are the store's comparison shoppers who buy specific items in competing stores and develop all the knowledge they can concerning prices, services, weakness, and strengths. Two major department stores in one eastern city revealed that their shoppers know each other well and generally exchange whatever information they need.

Another major source of information is company suppliers. In an attempt to better their positions with buyers or purchasing agents, the suppliers often volunteer information about competitors.

The company's advertising agency can provide competitive information based on the complete advertising budget and placement of competitors' advertisements. A pharmaceutical house executive said, "Advertising people are perhaps more keen than we are in watching competitors." He pointed out how agencies notice changes in products or in advertising emphasis, and relay this information to their clients or potential clients.



"... the greatest amount of information about competitors was collected through personal contacts . . . with other industry representatives"

"Because a company's advertising budget is usually married to the sales income of a particular product, massive promotional campaigns or complete withdrawal of all advertising for a certain product frequently are excellent indicators of how that product is performing."

Trade publications are considered by most companies to be their major source of published information about competition. Some companies participate in as many as 40 trade associations. Almost every industry has one or more trade organizations or publications through which information is gathered, tabulated, and presented to its membership. Typically, trade magazines contain both industry tabulations and informative features on specific companies—their products, facilities, advancements, or discoveries.

Eighty-six percent of the companies responding to the questionnaire stated that their competitors publish annual reports, but almost as many (82 percent) felt that companies not publishing an annual report gained no competitive advantage. The effect of "washing out" financial information in consolidated balance sheets was stressed as the major reason.

One grocery chain indicated that, since it operated principally in one large metropolitan area, its annual reports gave competitors a good opportunity to compare their operations in that city. On the other hand, this local company could gain little advantage from studying the consolidated reports of the nationwide distributors, because no territorial breakdown was included in the reports.

Sixty-two percent of the companies polled reported studying competitors' annual reports informally, while only 38 percent said they analyzed them systematically. Nonetheless, 65 percent keep competitors' annual reports on file.

Those companies which analyze competitors' annual reports utilize tools such as ratio analysis and percentage breakdowns in their attempts to evaluate a competitor's financial strength, labor expenses, research and development expen-

ditures, capacity to expand, sales expenses, financial policy, etc.

The board chairman of an oil company stated that annual reports were a problem because stockholders desire extensive information, while, at the same time, the company wishes to avoid telling more about its operations than it should. He felt that annual reports can provide much information if thoroughly studied. Some companies mentioned the advantages of studying reports over a period of years to identify trends or major objectives.

Government publications were reported to be the third most productive source of published intelligence, but were considered "generally far behind" other sources. Several Government agencies such as the Department of Commerce and Census Bureau, however, furnish information of considerable help to a business in assessing its competitive position.

"... an intelligent secretary to the president could collect and collate competitive data"

Gathering the data is only the first step in the process. A competitive intelligence program is not complete until procedures have been established to assemble and interpret the data, and use it to best advantage.

As would be expected, most companies reported passing information up through channels in the sales organization. Nearly all salesmen report information to their sales managers. Many large corporations maintain 25 or more fully staffed district sales offices. Inasmuch as these offices are local and concentrated in their scope of operations, they are in continual contact with their customers, local developments, and competitors. Competitive trends and policies that may have escaped detection at higher levels are usually caught at the district field offices. Thus, district offices can be compared to listening posts, strategically placed throughout the country, ready to report or substantiate any competitive developments.

The use of call reports was mentioned by a number of companies. Aside from determining whether a salesman is best utilizing his company's time, his salary, and his expense account, call reports represent a consistent and usually reliable source of information regarding competitive trends and practices. Almost all large companies require their sales representatives to fill out short call reports regarding the existing situation and progress being made on each account serviced.

Another method by which information is gathered by and from salesmen is the lost-business report, or similar reports from salesmen explaining competitive failures. One firm stated that such reports were very useful, "especially as related to competitive selling techniques." Another company said that such reports were "one of the salesmen's principal obligations, and that they yielded information on a broad range of competitive factors."

Sixty-four percent of the companies indicated that competitive information, once channeled up, is directed to a variety of top personnel in the company. In large organizations, it is often reported to a corporate staff group such as sales engineering. An executive of a metals company stated, however, that his management looks primarily to its division managers to evaluate competitive information because the managers are more detached and can assess the competitive situation more objectively than their sales personnel.

Once competitive information is reported, 37 percent of the companies answered that it was "pieced together by one person specifically assigned to this duty"; 23 percent said that it was interpreted by several persons separately, with little co-ordination; and 40 percent reported that such information was the subject of analysis in group meetings.

A pharmaceutical company, which stated that its salesmen reported extensive information about competitors, told of the use of a group of some 40 sales representatives on a panel. This special investigative panel reports directly to the director of market research and development, and is changed periodically. A textile company reported that a recap of the salesmen's reports on competition is discussed at a top-level monthly profit meeting.

Many Uses for Information

Uses of competitive information are as diverse as the many activities of a business firm. Those specific moves taken most often as a result of knowledge about competitors were reported as being action on pricing strategy and product development. Of lesser importance are such tactical moves as re-evaluation of advertising and promotional efforts, changes in manufacturing techniques, adjustments of trade discounts, alterations in selling pressure, and other corrective actions.

One company explained its use of information on competition by saying, "Reports of poor delivery or poor quality in a competitor's product enable us to step up sales pressure on his customers—in a nice, helpful way to the customer." An electronics firm stated, "We prepare sales aids comparing our products with competitors' products on a detailed specification basis and send them to all members of the sales force and to po-

tential equipment purchasers." Another company added, "Data sheets are reproduced and distributed to all salesmen to enable them to keep fully informed about competitors' products."

In order to realize the greatest benefits from information collected, many companies pointed out the importance of speed in reporting competitive data. A Midwestern manufacturer said: "This year one of our competitors, with great effort at secrecy, introduced an entirely new product. Within a week we had received five reports from the field. As a result, we designed a better product and introduced it by pictures within four weeks."

Suggested Plan of Action

The following plan of action is recommended for the establishment of a competitive intelligence system. This plan should enable the executive to outline the objectives of his intelligence program and to establish methods as to how it should be implemented in order to obtain maximum effectiveness where decision-making requires knowledge of competitors' strategies.

The need for competitive information is as important to the small business as to the large corporation. For this reason, this program has been designed in such a manner that an effective competitive intelligence system can be established, no matter how small the business is.

What information do I need? One important strength of any business intelligence system lies in the ability of top management to delineate in its own mind the type of competitive information required. Too often a salesman is requested to "Find out as much about XYZ Company's operations as you can," rather than, "What type of discount structure does XYZ Company have in the ..... area?" The lack of clear-cut directives can result in the wasted effort of both the collector and the reviewer.

What Is Needed?

The first question the businessman must ask himself, then, is: What information do I really need to make a decision? In order to answer this, he must determine which decision-making areas are most important to him. In automobiles, perhaps the most important decision-making area is style and design; the buying public is style-conscious. In the pharmaceutical industry, research and development is a paramount consideration; 75 percent of today's products probably will be displaced by newer developments within 10 years. Many food products are sold primarily on the basis of price.

In addition to identifying the decision-making areas, the specific information required in each area must be isolated. In satisfying both of these requirements, the executive must be the judge of what is important; no two industries are alike, and what is important to one may not be to another.

How do I get this information? Once the required information has been identified, the executive should analyze the sources at his disposal that can be used for the collection of this data. He must ask himself: What portion of these requirements can my salesmen supply? How co-operative are my counterparts in competing organizations in exchanging this type of information? What specific aspects can be satisfied through statistics and knowledge developed by my industry's trade associations? The executive should analyze his total present resources to determine the amount of competitive information that can be collected through each of these channels.

Allocating Money, Personnel

The businessman may feel that these sources cannot supply sufficient information upon which to base a really sound decision. At this point, he must decide whether additional knowledge is important enough to spend more money than he now has budgeted, or whether he should base his decision upon information at hand. If more knowledge is required, the executive will have to strengthen his collection agencies. This may involve hiring additional salesmen so that all salesmen can spend more time reporting on competitors' operations; or, it could mean that a new clerk should be hired to study and compile published sources of competitive information.

In addition to cost considerations, the executive must decide how far he will go to obtain this knowledge. Will he resort to more controversial methods of information? He is faced primarily with a question of ethics. Each industry has its own standard of ethics. The businessman must decide whether he will conform to it, attempt to raise the standard, or deviate from it in order to satisfy his objectives.

How is this information to be co-ordinated? By now, the executive has decided what information he will collect, who will collect it, and what methods the collecting agents will use. The next step is to determine the most logical group or person to assemble this data: An effective plan requires a central point of co-ordination through which all competitive information can be funneled. Much of the value of a competitive intelligence system is lost because such knowledge is routed throughout the organization in a haphazard manner. There must be a definite assignment of co-ordinating responsibility.

Secretary Can Be Used

In a small company, an intelligent secretary to the president could collect and collate competitive data which salesmen and other company representatives forward from the field. She could also study trade publications and other published sources for specific and useful information on competitors' activities.

In a medium-sized company, a full-time employee might be assigned the job of co-ordinating competitive intelligence. This person would also be responsible for maintaining complete files on all important competitors.

In large organizations, a staff group could be utilized to compile comprehensive reports on major competitors, based upon the information received from the report ing channels. These reports would analyze past trends and discuss present operations in an effort to project the actions and capabilities of a competitor at a future date. The reports could then be routed to executives throughout the organization whose decisions must be based—at least in part—on competitors' strategies and tactics.

Proper Flow Is Necessary

It is important that the executive insure a proper flow of information into this point of co-ordination. Definite reporting channels, on a continuing basis, should be established. Reports may be oral or written, depending upon the policies or requirements of each company. Salesmen would normally report this information to

(Continued on page 20)

DATA PROCESSING

present and future

BY *Felix Kaufman*
Electronic Data Processing Specialist
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TWO intensifying and interrelated problems confront American management today. One is the growing mountain of paperwork, a product of prosperity, i.e. increased sales, as well as the increasing demand for reports by State and Federal agencies. The other problem is the need for more reliable data to make managerial decisions more quickly.

One result of all this is the rapid growth in the number of clerical workers compared to all workers, as illustrated by the chart on the next page. Another result is the momentous developments in the techniques of data processing. The entire field of information handling is now being viewed in a new light.

Most of the available information on data processing follows a narrow approach. It deals with the application of some type of machine to a specific function of a particular business. However, this article will take a broader point of view and will discuss briefly the present and future impact of these new technological developments in the field of information handling.

Although no two data processing situations are exactly alike, they very often have common characteristics from the standpoint of organization. This permits use of a common environment as a model to examine the character of current systems.

Current systems are characterized by specialization—a concept adopted in paperwork because it is said to afford the same advantages as were produced by its application to manufacturing processes, and also because it provides control techniques through the division of labor.

Specialization in Paperwork

Specialization arises in paperwork in various ways. As machines of relatively modest ability are introduced, a few functions are mechanized, whereupon it becomes convenient to create departmental lines on the basis of adaptation to machinery. Other functions, not adapted to machine techniques, now acquire special status as "exceptions" because they were related to tasks that can be performed on machines. This may also be the basis for further departmentalization of the data processing effort.

Aside from the influences of mechanization, we also know that specialization promotes the use of several files, as opposed to the consolidation of files, and the maintenance of files is frequently the rationalization for setting up additional units in the paperwork hierarchy.

In summary, there are various demands for specialization in data processing now, resulting from a desire to optimize the use of human abilities, the requirements of control, the scope and nature of equipment skills, the exception requirements and, finally, the isolation of activities which involve the exercise of that vague thing we call "judgment."

All of these taken together produce data processing as we know it—many separate entities emphasizing specialization. In effect, it is a body with many organs linked together by intricate communication and coordination requirements.

Present Disadvantages

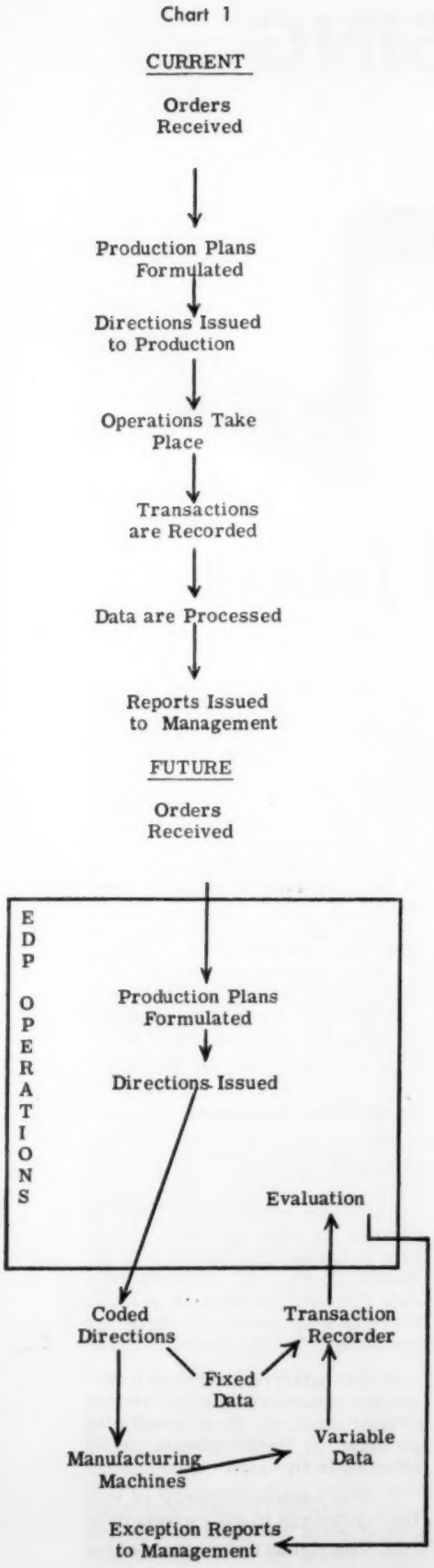
Electronics is changing this environment significantly. In so doing, there is an implication that present methods are inefficient at least by contrast to new methods. Therefore, it is useful to inquire into the disadvantages of contemporary data handling systems. In general, the following points set forth the problems:

1. The existing techniques emphasize communication and coordination skills. It is a continuing struggle to make people really effective in this area.

2. The natural tendency of current systems is to store excess data.

3. The logical consequence of too

Chart 1



much data is redundancy in data handling.

Inherent in any system of specialization is the necessity for good communication. By breaking an object down into many parts, there is created a need for cooperation, and lines of communication must be established to facilitate this need. This is the payment required for dividing the system up in the first place; resources, including people, must be devoted to the communication effort thereby creating separate policy making and control problems as well.

Closely related to the problem of communication is the problem of coordination. Some might say that there should not be a differentiation between the two. The two problems are stated separately here to emphasize that the expenditure of time and effort and the use of facilities to set up lines of communication do not automatically guarantee their effective use. Coordination is the mark of effective use; it is a harmonizing of the various parts based upon the way in which the organization uses both formal and informal lines of communication. Present environments call for increasing attention to problems of communication and coordination as more and more parts are put together to do a job.

Duplication Is Involved

The present environment involves certain duplication. In the process of handling data you cannot get away from the fact that separate departments doing various parts of a paperwork job orient themselves around duplications in file data. These departments must overlap in the storage of information and it follows that they tend to overlap in the handling of information.

At first glance, this may not seem to be very important. But if there is a dedication to optimization of information-handling systems, as the way in which the most economical and most efficient system is finally achieved, it is necessary to recognize that such duplication is a disadvantage. More data than are needed are stored, which results inevitably in excess processing activity.

How does electronic data processing surmount the problems that have just been described? What are the problems that surround the methods now available?

The introduction of electronic systems shifts the emphasis from specialization to versatility. With electronics it is no longer necessary for the organization to be geared to specialization. From where does this versatility flow? It flows from the fact that having once planned out the system the job may be turned over to a "clerk" of extraordinary versatility—the electronic machine. It is indifferent as to whether it is asked to do one job or another. It knows how to do everything, that is, all of the jobs that have been planned for it. As a result, to the extent that it has been possible to set up many different activities for it, we find that it is now possible to surmount departmental barriers. Versatility therefore replaces specialization; internal communication and coordination becomes largely automatic.

Redundancies Encountered

Unless it is decided to erect a procedural system with certain redundancies, we will, in general, avoid the redundancies of storage, the redundancies of processing, and the redundancies of idle capacity that are encountered in existing systems. Therefore, the fundamental premise that the electronic machine is like a clerk who can be asked to do anything, is tantamount to having superb talent in the office capable of handling any task which might come along.

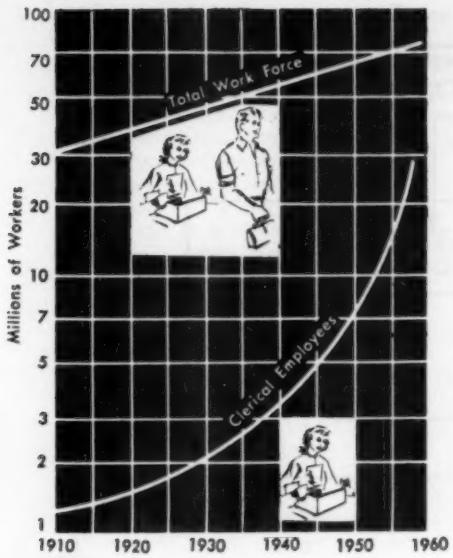
This is a glamorous description and paints a rosy picture with respect to the skills of electronic equipment. The reader would be misled if this description were not qualified. Computing machines do not absorb sectors of data processing activity overnight and the transition process itself is frequently a difficult period.

It is convenient to think of the second phase of an evolution in paperwork methods as a separate segment in the information-handling process, although it overlaps the first, and to refer to it as the process of including or automating the data-creating event.

Interest in Transactions

In the last few years much consideration has been given to the way in which a transaction is handled at the time it occurs. This surge of interest in the transaction process has been emphasized by the tremendous speed of electronics.

In addition, the introduction of electronics and the parallel development of a "scientific" approach to business problems has required an



Clerical workers have increased thirtyfold during the last 50 years while the total work force has grown only two and one-half times

extension of an operations-research type of thinking to the transaction. Perhaps we are more concerned at the present time with handling source data better for no other reason than the fact that the whole problem is being viewed with a much greater interest in optimization.

To best view the present and future possibilities, the transaction recording process should be classified into two areas. One area deals with transactions that are internal to the data processing system; the other is external and pertains to the outside world, involving more than one data processing system.

The interesting thing about internal transactions is that they are, or can be, the consequence of directed activity. They result because management has made decisions to do certain things and are, therefore, part of a loop whose elements include planning activities, the execution of these activities, the recording of results and the interpreting of results. The transaction process then, in connection with internal events, is part of a loop.

This loop is capable of being closed, because the presence of EDP stimulates the development of computer applications that formulate plans to direct internal activities. For example, in a manufacturing activity, orders can be exploded into labor, material and tool requirements and can be screened against available resources and schedules set up to load machines according to some optimizing concept. These plans are outputs of a system which will process the data produced by execution of the plans. Therefore, the directions can be set up to produce, as fixed data, part of the content of the forthcoming transaction.

Variable Data Known

In principle, this skill has also existed with cards. Now, however, some of the data previously considered variable becomes known in advance because of the availability of better tools to forecast operations.

In addition, the ability to record variable data in machine language when the event is initially recorded is improving in several respects. The operator of a machine or of a process creating transaction data will be able to insert these variable data himself instead of relaying information to human processors. Furthermore, various measurements needed to develop variable data about the event will be made by the transaction recorder itself. The consequence of these developments is EDP direction of internal activities via documents or other media containing coded data, and the collection of transaction data by recorders producing inputs which can be read automatically by the EDPM. This is sketched in a general way by Chart I.

Noting that the primary reason for recording transaction data is to permit comparison with projections (projections plus or minus variances = actuals), one can foresee the day when the transaction device itself will have *variance detecting* skill. Then the "no-variance" events might report themselves by absence.

Variance Detection

This development will occur when it is cheaper to give many input devices a skill—namely, *variance detection*—usually performed by the central processing machine. An important cost factor in reaching this position will be the saving gained by being able to ignore the "no-variance" events.

The assumption of normalcy via the absence of data also requires some technique for insuring that absence assumptions are based upon activity. Naturally the entire hypothesis is suspect if the system cannot differentiate between an absence of data due to events occurring as expected and the absence of data due to the fact that no events have occurred.

The variance-detection philosophy certainly does not apply to all types of events. It may be necessary to report certain "no-variance" events anyway. (As an example, payroll preparation *might* create that necessity.) In addition, there are transactions that do not involve a variance philosophy.

Automation of external events—where an outsider is involved—is getting a great deal of attention too. It differs from the previous class, the internal events, because its occurrence is not directed by the data processing system at hand. Accordingly, its information content does not contain data which can be known in advance. Developments in this realm must concentrate on adaptations to the transaction environment.

This can be done in a number of ways. In retail establishments, for example, we cannot predict specific transaction data but we can predict that classes of merchandise and types of customers will be involved. This influences the design of sophisticated methods for accepting variable data via such things as garment tags and charge plates. Incidentally, such approaches to fast insertion of variable data apply to internal techniques as well.

Two other phases of the data processing future arise out of developments in automating the transaction situation. They can be considered outgrowths of Phase II. However, they seem to be important enough by themselves to warrant separate categorization and they are described below as Phases III and IV.

Previous observations about planning operations, exploiting known data, and the sophisticated collection of variable data are radically affected by the presence of automatic direction and control of the machines themselves. Here, by machines, we mean devices which transform or alter materials and not the data processors. Automation is the term usually used to describe this development even though it can also be used in a generic sense to include EDPM. It is used here to apply to the former only. Accordingly, one can refer to a marriage between EDPM and automation.

Joining EDPM and automation has intriguing aspects. Historically, data collection to accomplish basic

accounting activity has been based upon the recording of *all* transaction data. Of course, we have had excellent reasons for collecting actuals. First of all, there may be no projections as to what ought to happen, in which case nothing is known in advance and actuals are all we have. In the second instance, there are projections but they are variance-dominated because most of the actual events do not occur in the form in which they were predicted. In this situation the variance or disturbance conditions are of great concern from a managerial viewpoint and emphasis must be directed toward techniques which process all of the input data. In either instance actuals are collected because we have no idea what will happen or insufficient confidence in imperfect forecasts.

Projections Direct Machines

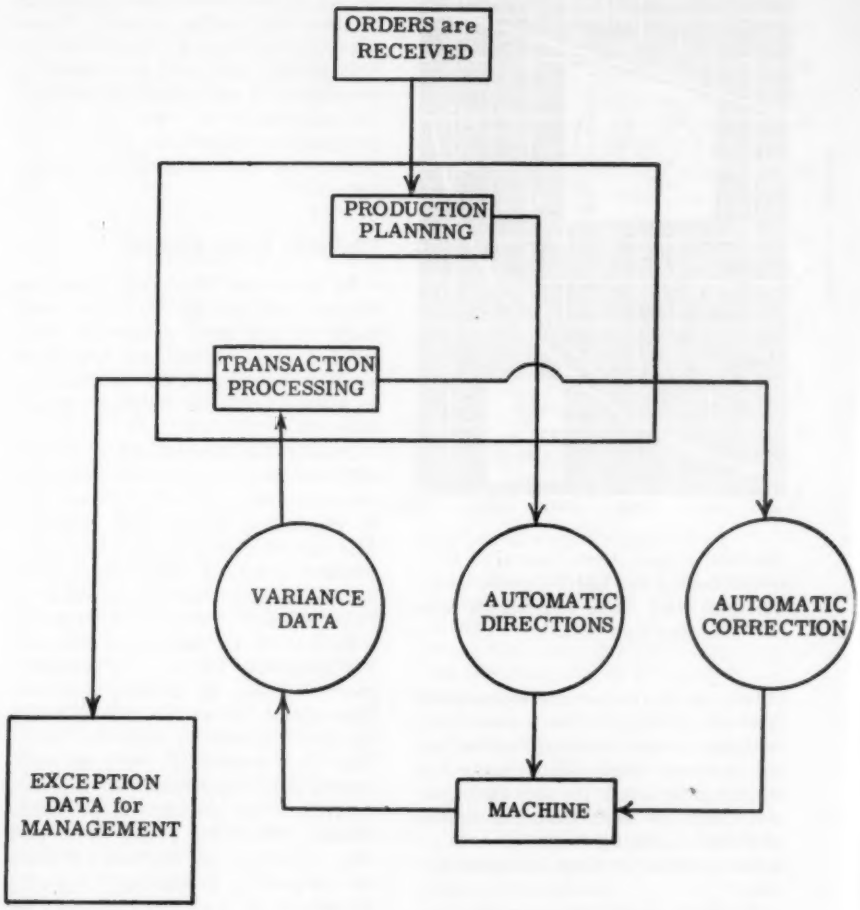
Now, however, we can predict with greater confidence. Internal events can be directed and will in general occur as specified because the principal disturbance producer is man himself and he is playing a less direct role. If projections are made that themselves direct *machines*, there should eventually be an appreciable reduction in disturbances, if not a disturbance-free system. This sets up the interesting possibility that some accounting areas will be geared to the condition that variances are exceptions rather than the rule.

The transaction recorders now in development and referred to in Phase II will survive, if at all, modified to communicate directly with controlled machines. They will be intermediaries between machines and data processors, whereas now men and recorders are involved. If cost considerations permit, the automated machines can go on-line with the data processing unit itself and bypass the local recorders we have been talking about.

Exception Approach

As these developments occur, we will have shifted away from lack of knowledge of actuals to accurate prediction. This means that the *data collection process* can be based upon the exception principle. As we currently know it, the exception approach applies primarily to the *evaluation of data*. It has not been significant in the *collection of data*. The latter possibility is b e i n g stressed now.

Chart 2



The logical development will be to have these controlled machines produce exception data only, and all actuals will be collected by assumption at the time of prediction. In such an "assumption system" *the basic data about operations are known when projections are made* and the data processing system is liberated from the scheduling complications created by conventional transaction collection.

These possibilities are shown in Chart II.

By way of concluding remarks about this phase, two qualifying observations are in order. The rate of approach to this *super-exception* system is anybody's guess and its applicability is limited to predictable events.

The important barrier to complete automation of external transactions is the legal separation of transacting entities.

When two divisions of the same organization o p e r a t e at arm's length with each other—as when one purchases from the other—a higher authority (corporate management), can, if it desires, insist upon standardization in communication. Such standardization permits automatic handling of externally generated inputs if both systems are set up electronically.

Legal Barriers

However, if the two divisions were truly separate legally—two separate companies—the higher authority wouldn't e x i s t and neither would standardize. Legal barriers oppose the use of compatible equipment and the achievement of standardization in data organization is made more difficult when separate legal entities are involved.

EDP, however, spotlights timing and storage inefficiencies in traditional input-output techniques. Why go from magnetic tape to paper or cards and then back to magnetic tape if it can be avoided? Now there is a greater incentive to substitute cooperation for the corporate authority of the divisional example, so that data can be moved between separate processing enti-

ties without a conversion from machine language.

There are examples of such developments. A military inventory activity, in its relationship to a large commercial supplier, contemplates the movement of magnetic tape in lieu of hard copy. Note the recently announced willingness of the U. S. Treasury to accept W-2 quarterly payroll data on magnetic tape from certain EDPM systems. How much of this automatic communication we will see is hard to say; nor can we predict the rate at which it will develop. I think we can confidently expect a good deal.

Closing External Loop

Closing the external loop has another facet. It has always been evident that clearinghouses, by exploiting an offset principle, can drastically reduce the number of handlings of a particular transaction. This is a potential we are just beginning to exploit by broadening the applicability of clearinghouse technique. As certain institutions, particularly banks that are already data processing middlemen, acquire the new tools, they can undertake to perform other "nonbanking" type activities. It isn't out of the question to visualize banks being as vitally concerned with data processing service as they are with financial affairs. Tendencies toward sharing of EDPM capacity will also stimulate the use of clearinghouse techniques.

Not to be ignored in this discussion is the technique of standardizing input by putting your own transaction device in the customer's office. This approach got a real push with the development of the equipment used by Western Union to eliminate the messenger boy. Now we see it extended to sending tickets, reservations, etc. A logical extension, subject to cost factors, will occur when the information being sent can be read automatically.

Conclusion

Looking at all of our business activity, it is apparent that duplications and inefficiencies exist throughout the system because of opposition toward standardization and the use of techniques which emphasize integration rather than separation. Some of these problems exist because of higher-priority considerations. (We could hardly promote mergers and consolidations because it would improve standardization in information handling!)

Nevertheless, the widespread adoption of electronic techniques cannot do less than modify the current structure of data processing. END

Customer Complaints Studied

Eight "commandments" for better customer relations are included in a report on a study of causes of customer discontent issued by the Better Business Bureau of Pittsburgh.

The report cites the ten trade groups which cause the most frequent public complaint and identifies the eight basic situations which arouse the ire and resentment of customers.

Based on complaints filed with the BBB during the first six months of 1959, the analysis offers a comparison with results of a similar study made during the same period last year, when the survey was launched.

Worst offender among the trade groups, according to the study, was the home improvement business, which accounted for 15.7 percent of the complaints filed by customers.

Second on the list was the furniture and floor coverings business, cited in 10.4 percent of the complaints.

Other trade groups, according to the volume of complaints filed against them, were:

Television-radio sales and service, appliance sales and service, photography, heating equipment-fuel and service, automotive equipment and service, apparel, used cars, magazine sales and subscriptions.

Contract Failure Cited Most Often

At the top of the list of customers' complaints against business is failure to fulfill guarantee or contract, which accounts for 23 percent of all complaints.

Next most frequent cause of dissatisfaction is failure to effect adjustment as promised, representing 15.1 percent of the total complaints.

A close third is the category described as "unsatisfactory installation or service."

The other five sources of trouble listed in the report, according to the number of complaints filed, are: oral misrepresentation, failure to deliver merchandise, defective merchandise, misrepresentation in advertising, and unavailability of advertised items.

George H. Dennison, manager of the Better Business Bureau, commented on the report:

"The principal purpose of the study and the report is not to condemn the infractors but to help trade groups and individual business operations to improve their customer relations.

"Since it is within the power of most firms to control these basic causes of dissatisfaction, an immediate improvement in customer relations can be expected with a minimum of effort, once the cause of the trouble has been properly diagnosed."

Eight "Commandments" for Business Listed

The eight "commandments" for better customer relations incorporated in the report are:

1. Thou shalt not offer a guarantee nor enter into a contract which thou canst not keep.

2. Thou shalt not promise to adjust a complaint except thou adjust it.

3. Thou shalt charge thy installers and service men with competence and responsibility.

4. Thou shalt charge thy salesmen with truthful statements and fair play to thy customers.

5. Thou shalt not falsely promise delivery of thy merchandise by a certain date.

6. Thou shalt not knowingly deliver faulty or inferior merchandise to thy customer.

7. Thou shalt not speak with a forked tongue in thy advertising.

8. Thou shalt not advertise merchandise at very low prices for the purpose of switching unwary customers to high-priced merchandise, then refuse to deliver the advertised item. END

Competitive Information

(Continued from page 14)

sales managers who would pass it along to the co-ordinator. Engineers on field trips might be expected to pass along knowledge about competitors' activities to their supervisors who, in turn, would relay it to the co-ordinator.

No plan should be so rigid, however, that the system endangers the effectiveness of the decision-making powers of the organization. Some competitive data will require immediate decisions before reaching the point of co-ordination. Frequently, a salesman will report some newly acquired knowledge—a point-of-sale promotion, for instance—that would require immediate action by the sales manager. In such a situation, the manager would logically act upon it himself before passing it on to the co-ordinator.

Data to Be Forwarded

The data forwarded to the co-ordinator should be: (1) information requiring the combined decision-making efforts of the entire organization (knowledge of a new product successfully marketed by a competitor); or (2) competitive information that would most likely be useful to another area of the business (knowledge of a competitor's research and development program as reported by a salesman).

By determining what data should be relayed up the line in the reporting chain, the agent is really grading the importance of this knowledge to the rest of the organization. This grading should be done at all levels in the reporting cycle. When the system forwards only necessary information, it is operating effectively.

In order to determine what information is important and what is not, the collecting agent must know what is expected of him. The executive must establish the criteria by which his subordinates may judge the value of competitive data. The importance of this concept cannot be overstressed. If the decision-making area requires knowledge of a competitor's research and development activities, the businessman should clearly designate the specific characteristics of the activities he is interested in.

... Once the collecting agents become familiar with the guidelines for judging the value of information, they may begin to report useful data which has not been specifically requested. At this point, all types of useful "voluntary" and "requested" information commence to flow up the line. The real test of the effectiveness of the reporting cycle is when a constant stream of valuable competitive data is being funneled to the co-ordinator.

Dissemination, analysis, and use of the information: The stage has been reached in this program where useful knowledge is continually being reported and channeled to the co-ordinator. This person will decide to what functional areas he will send the information. Proper training and guidelines should enable him to make intelligent decisions on the dissemination of this data. The co-ordinator should keep a record of disseminated information for the benefit of other departments in the company which may wish to make use of it.

The final step in the program comes when the area which will act upon the data has received it from the co-ordinator. This area must analyze, interpret, and decide how to use this information in a manner that will best strengthen the competitive position of the organization.

An example of how one company benefited from the quick reporting of useful information concerned a wildcat strike of this company's single competitor. At this time, the products of the two companies were in great demand. Late one Friday afternoon, one of the company's salesmen telephoned his sales manager to report that the competitor's employees had just walked out on a wildcat strike. The sales manager relayed the information to the home office.

The top management decided to continue plant operations over the week end in order to supply not only its own customers, but those of the struck plant as well. As a result of the rapid reporting of such useful competitive information and the manner in which it was acted upon, the company strengthened its market position at the expense of its competitor.

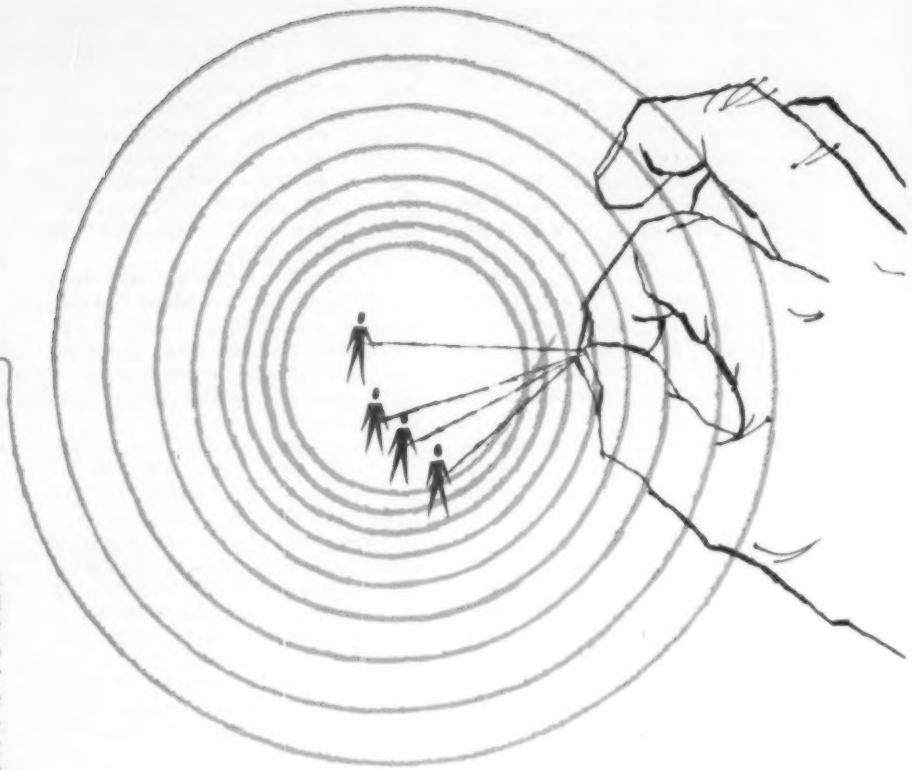
Guidelines Are Essential

The need for policies: A co-ordinated competitive intelligence program requires the establishment of definite policies by top-level management. Guidelines as to the type of information required must be worked out between officers and subordinate managers. The management must assess the total resources available for the collection of competitive data and decide whether they are sufficient or whether the collection function should be expanded. Ethical standards to be used in the methods of information collection should also be established. Management must decide how large the co-ordinating staff will be, and how much money and time will be allocated to the function of competitive intelligence.

Conclusions: The research group concluded that competitive intelligence should play a significant role in the decision-making process of a business. A proper balance must be maintained, however, in the use of this activity; the organization which overemphasizes the importance of competitive information may stifle the creativeness of its own people. As one executive put it, "If you spend too much time finding out what your competitor is doing, you may be spending too little time developing newer and more efficient products and processes of your own. If you are a leader, you become a follower. If you are a follower, you become more entrenched as a follower . . . You become less imaginative, less dynamic, less resourceful."

The businessman himself must determine the role of competitive intelligence in his industry and how much emphasis he will place upon it within his own company. This concept represents but one of the many steps involved in the decision-making process. If it is well co-ordinated, however, the collection of competitive information can lead to consistently better corporate decisions. END

The Art of Administration



PART II

BY *Ray E. Brown*

ADMINISTRATION has been a popular subject for study and writing in recent years. This new interest in an ancient art has also provided an audience for a number of the scientists in some of the academic disciplines who previously were close to the point of talking to themselves. Their new audience has been both large and attentive. A rapidly expanding economy and the increasing complexities of modern society called urgently for more and better tools of administration and an increased understanding of the art of using them.

It also called for help from any qualified and responsible corner. Some of those who responded brought an understanding of the sciences that underlie administration and the research techniques with which to probe for new knowledge in behalf of administration. These represented a strong appeal to the practitioners of administration who wanted very much to develop into a full profession by having a recognized science as well as an art.

Administrative Studies Help

Although the quality of these studies of the sciences of administration may not have equaled their quantity, they have made some distinct contributions toward a profession of administration. They have helped to raise the status of the administrator by further proving that administration is a rational and conscious process, hence more than a matter of hunch and flying-by-the-seat of a pair of gray flannel pants. In a number of areas of administration, they have provided the administrator with additional understandings with which to work and with improved means of evaluating the results of his work.

With all this effort on behalf of administration, we should have a much improved practice of administration. But, most observers would agree that the practice of administration has not improved accordingly. Administrators have attempted to use the new understandings and the new tools, but somehow they are not getting the expected results. They are in somewhat the same spot as the weekend gardener who faithfully follows the directions on the package of seeds but who does not get the tomatoes pictured on that package. Employee performance is not noticeably better and employee job satisfaction seems to have worsened. It can be argued that, in general, administrators are not practicing as well as they did before the scientists came to their aid.

A review of what has been written and said about administration in recent years, and the manner in which administrators have attempted to interpret and utilize the writings and sayings, reveals at least some of the reasons administration is not getting more mileage out of its new high-octane supplements. In the first place, the study and thought given to administration have served to fragmentize and proliferate it. Those doing the studying have, by necessity, segmentized the administrative process into studiable parts so as to precisely examine isolated bits of it. Further, the bits chosen for examination have reflected the interests and competences of the examiners rather than the importance of the particular problems to the field of administration.

Entire Picture Must Be Seen

This has tended to overemphasize in the administrator's mind the relative importance of the parts that have been chosen for study and to cause him to lose sight of the total administrative process and its purpose. Just as it is not possible to describe a watch by describing its parts, neither is it possible to maintain a balanced view of administration without relating the parts to the whole. To use an old expression, a growing number of administrators in recent years have seemed unable to see the forest because of the trees.

The analysis, and consequent emphasis, of the parts of administration without regard to the whole has also accentuated the high susceptibility of administration to form and faddism. Like the other professions, administration has both a science and an art. It is the art that controls the practice and thus controls the manner and scope of the use of the science. Perhaps because practice is mostly subjective in nature, practitioners in all professions give great place to form because form is tangible and objective. Form provides concrete proof to all concerned, and especially to the practitioner, that the practitioner is doing something positive and that he is utilizing tools common to the best practices in his profession.

Methods Overemphasized

This obeisance to form has been particularly noticeable in administration in recent years and accounts, among other things, for the rapid growth in red tape that has increasingly plagued organizations. Valuable new ideas often prove to be hindrances because of the emphasis given to form over substance. For instance, much study has been given in the last two decades to communications in administration, and now communications is a much improved tool for administration. Despite the availability of the new tool, however, many organizations still do not have good communications. Some of these organizations have developed elaborate means for communications but do not seem to realize that the quality of the communication counts far more than the form. Trifles dispatched to stockholders, employees, or the public over the best possible system of communications can only remain trifles.

Somewhat related to the above is the faddism that seems to be an occupational hazard of administration. Too often when administrators find a good tool they overmagnify its importance and its use to the point that the organization becomes the servant of the tool.

Fetish of Communications

This confusion of administrative tools with administrative values can be illustrated by again using communications as an example. Many organizations have made such a fetish of communications that they now work hard for communications just for the sake of communications. They appear to measure themselves by how well they communicate rather than by how well communications serve the organization. This Bikini attitude toward exposing administration's every thought keeps the administration so busy keeping the employees informed that it has not time to see what employees are doing or thinking.

The extreme formism and faddism that has increasingly characterized administration in recent years indicates an uncertainty on the part of administrators as to what the purpose of administration really is.

Those administrators who have faithfully read their literature, or paid attention to some of the speakers imported onto their convention programs in recent years, must indeed be confused as to what administration is and what the administrator is supposed to be doing. Any confusion created by the researchers is mild compared to that created by the evangelists who come with graven images with which to seduce the administrator.

Many Roles of Administrator

Only the most adept and agile of quick-change artists could qualify for a role that calls for so many different faces as they would have the administrator present simultaneously: The administrator is exhorted to serve as a leader but to let the group command; to serve as a social worker but to abhor paternalism; to play Freud but respect the privacy and dignity of the individual; to bring the influence of his organization into politics but to forget the interests of his own organization; to eliminate stress within the organization but to encourage and nurture the nonconformist and the misfit; and to have convictions but be so broadminded he does not know the difference between right and wrong. The overtones imply that high efficiency is somehow equivalent to low morality.

If we want to improve the practice of administration *we must first establish firmly what administration is and what it is supposed to do.* If we want to prevent its gullibility to each new fad, we need to understand the role of administration sufficiently to determine the relevancy and utility of the new ideas and tools that become available. If we are to prevent the perversion of administration by doctrinaires who would make it the errand boy of their ideologies, we must decide what its own doctrine is. Without some clear-cut notions as to the meaning and nature of administration, we are unable to assist those who are competent to study its problems or to defend it against those who would sap its vitality.

Human Behavior Affected

The only basis for administration is the assumption that it causes human behavior. Unless this assumption is true, there is no justification for administration. Unless desired behavior results, there is no point in having administration. The purpose of administration is to influence human behavior, both internal and external to the organization, through modifying the causes by some system of inducement so as to accomplish the objectives and ends of the particular organization.

Stated more precisely, it means the interference with human behavior that does not conform to the pattern adopted for the organization. If people always did naturally what was best for the enterprise then there would be no need for the administration.

As James Madison said in one of The Federalist papers, "It may be a reflection on human nature that such devices should be necessary to control—but what is government itself but the greatest of all reflections on human nature. If men were angels, no government would be necessary." Madison is not completely applicable, however. If men were angels, we would still need administration. Even angels can have honest differences of opinion as to policies and methods. Administration is necessary wherever there is a difference of mind between members of the organization.

Obedient Rebel Needed

This statement of the purpose of administration is of course in conflict with the prayers being said so loudly today for the lost soul of the "organization man." Because of the growing cult of the organizational nonconformist, it is necessary to examine that concept before administration abdicates all its rights to insure compliance and discipline within the organization. Those who exalt nonconformance within the organization need to review the meaning and purpose of organization. Any acknowledged

THE NATURE OF ADMINISTRATION

REPRESENTATION

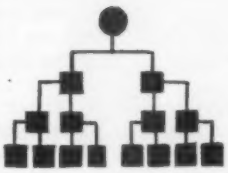
Giving a voice to the organization, to employees, and to outsiders. Communication.

EVALUATION

The judicial process, determining whether policies are appropriate and whether they are being followed.

DIRECTION

Decision-making . . . taking options, choosing alternatives to follow.



ORGANIZATION

Arranging people to people, people to things, and things to things.

definition of the term can be boiled down to imply unity. Organization represents a deliberate plan to control behavior and to inhibit innovation. Failure to conform to prescribed organizational behavior is mutiny against the organization. Random behavior is completely incompatible with organization and by definition becomes unorganized behavior.

Those who argue that the organizational requirement for conformance is stifling creativity and preventing the maximum personal contribution by the members of the organization, to whatever extent their arguments have validity, are placing blame on the wrong factor. Such stifling of ideas, at any point within the organization, is the fault of the manner in which the organization is being administered rather than an inherent defect in the concept of organization. Effective administration designs the organizational structure so as to encourage creativeness and the transmission of ideas. It attempts to create a climate in which the enterprise has the greatest possible gain from the ideas generated at all levels within the organization.

The organization *needs* the obedient rebel who thinks on his own, but it cannot function efficiently and tolerate the rebels who have no sense of the responsibilities to which they must be obedient.

Administration affects human behavior by modifying the causes through some system of inducements. No matter what else we might like to call these inducements, they are simply a matter of rewards and penalties; and administration must always regard them as such. Too much has been written of leadership as if it were a sort of confidence game. For some reason it has become necessary to appeal to the subconscious, rather than the conscious, to act covertly rather than overtly when seeking desired behavior from personnel.

This administration by seduction is somehow expected to maintain the dignity and self-esteem of the worker. Actually, nothing could possibly degrade the individual more than this sort of attitude toward him. The rights of individual decision and personal responsibility are basic to human dignity. These imply a rational choice between options, each of which should be expected to produce different consequences so far as the individual making the choice is concerned. The individual attempts to maximize the satisfaction of his needs and drives through his conduct, and the administration attempts to maximize the control of the individual's conduct through the satisfaction of those needs and drives. The aims of both should be explicit and open. Without entering into the legitimate question as to whether the critics of administration have really faced up to the reality of what motivates and energizes people, we need to reexamine the rights and responsibilities of administration to become involved in these needs and drives of the members of the organization.

Administration cannot be expected to utilize the resources of the enterprise in behalf of those needs and drives that are not job related or do not affect job behavior. Neither does administration have any right to involve itself in the affairs of individuals except for the purpose of influencing job behavior. Anything else places administration in the position of playing God.

Mission of Administration

The mission of administration is to accomplish the purposes of the enterprise. The enterprise may of course have any sort of purpose, but administration is always a means and not an end. It is a route to a destination as represented by the purposes of the enterprise. One may have perfect administration for an enterprise with socially undesirable ends or very imperfect administration for an enterprise which has socially desirable ends. Administration is the process and not the product. Its sole purpose is to secure the ends of the enterprise through influencing the behavior of all concerned in achieving those ends.

The sorts of influences that administration may use in its efforts to modify behavior are of course subject to restrictions. Administration is not given an unlimited license in its efforts to affect human behavior. These restrictions may be classified as environmental, and these form the climate in which the enterprise operates. These, briefly stated, are the moral, legal, and political restrictions enforced by public authority and public opinion; and the sanctions of organized groups enforced by such agencies as labor unions and by consumer

groups. Administration in turn has the right, and the responsibility, to attempt to influence these restrictions and to moderate their impact on the efforts of administration.

The sorts of behavior that administration may seek are dictated by the ends which the enterprise is intended to serve. Administration is a process and, like all processes, it works within a set of dimensions. The weight exercised by each dimension varies with the ends sought by the particular enterprise.

This aspect of administration has not been recognized and has confused some writers on the subject of administration who have talked of different processes of administration. The process is the same, regardless of the sort of type of enterprise, but the dimensions utilized to control the process vary according to the ends sought by the particular enterprise. These dimensions are not reciprocal and neither are they mutually exclusive. Except under very rare circumstances they may be said to be in conflict with each other, and conscious effort must be given to giving appropriate weight to each, in keeping with the goals of the enterprise.

Four Dimensions Listed

At least four such dimensions of administration can be identified. One is the efficiency dimension, best defined as *performance-oriented.* It is based on the concept that the purpose of the organization is to produce the best possible product, or service, at the least possible cost.

This one must be tempered by the second, which can be classified as the human dimension. It is *personnel-oriented* and is based on the concept that the purpose of the organization is to provide the greatest possible benefits to the members of the organization. This is the dimension to which unions attach almost complete attention.

Both of these dimensions must in turn be compromised with the public dimension. This dimension is *community-oriented* and represents the concept that the welfare of the public is paramount. Our public regulated enterprises, such as the utilities, are examples of enterprises where this dimension has been highly emphasized.

Finally, there is the institutional dimension which is concerned with strengthening and enlarging the enterprise itself. There is a sharp difference between the goals of the enterprise and the goal of maintaining and perpetuating the enterprise. This is best illustrated in the nonprofit and noncompetitive enterprises that fight to survive long after the purposes for which they were established have been fulfilled.

Division of Labor

At the risk of overgeneralizing, one could state that the difficulties confronting the steel industry today are due to a failure on the part of administration in that industry to maintain the proper balance between the several dimensions of administration. They permitted the industry to become so personnel oriented, due to union pressure, that the efficiency dimension was ignored to the point that markets were endangered. The efforts to correct the situation have resulted in a prolonged strike, and this in turn has brought the industry into conflict with the public dimension and aroused a clamor for public intervention in order to end the strike.

Some of the difficulties that have beset administration in recent years can be attributed to the specialization in administration that has accompanied the growing complexity of the administrative task. A division of labor has occurred in administration in order to provide more attention and more highly trained individuals to cope with the complexities. This specialization has caused an overemphasis on technical knowledge and a consequent de-emphasis on the balanced practice of administration. The chief administrators of many enterprises and agencies depend upon the weight of their scientific knowledge and background to carry them through administratively, and show little concern for those functions of administration for which their background did not prepare them.

Administration's Four Functions

In the long run, no enterprise can be effectively administered unless the major functions of administration are carefully watched and adequately performed. There are four such functions that are unique to the administrative process and are both the prerogatives and responsibilities of the administration.

The first of these functions is representation. This means giving the enterprise a voice so as to make it articulate. Somebody must speak for the enterprise since it cannot speak for itself. The administration may employ a mouthpiece, as they say in Hollywood, but the administration must remain ultimately responsible for representing the enterprise internally and externally.

The second function is that of direction. This is the function of c h o i c e—of decision-making. Administration is continuously confronted with alternatives and it is the choice between these alternatives that permits administration to impose its ideas and its thinking upon the enterprise. The fact that decisions are made in the face of incomplete and inadequate data makes it necessary that the administration have a philosophy to bridge the gap of incomplete information.

A third function is that of organization. This is the function of arrangement. It is a matter of establishing relationships and of deploying the resources of the enterprise—both human and material. This function permits the administration to departmentize the operations, to set up the organizational hierarchy, and to establish the lines of communication within the enterprise.

The fourth function is one of evaluation. This can be described as the judicial function. It is a matter of assessing and reviewing performance at all levels of the organization. Unless this function is fully accepted by administration, it cannot know where the enterprise is going, or even where it has been. It is undoubtedly the most difficult function of administration because it is the least exciting. It is difficult also because it requires that administration pass judgment on its own accomplishments and performance. To pass judgment on its own work, administration needs to keep in mind what administration is supposed to be doing. It must understand that it is a process, a means, and that it has as its task the securing of appropriate behavior in behalf of the goals of the enterprise it is administering. END

ABOUT THE AUTHOR: *This is the second in a series of articles on the art of administration by an amply qualified author. As Professor Brown, he teaches at the University of Chicago's Graduate School of Business. As Mr. Brown, he is superintendent of the 1,600-employee staff of the University of Chicago clinics. A Phi Beta Kappa graduate of the University of North Carolina, he earned an M.B.A. at the University of Chicago.*

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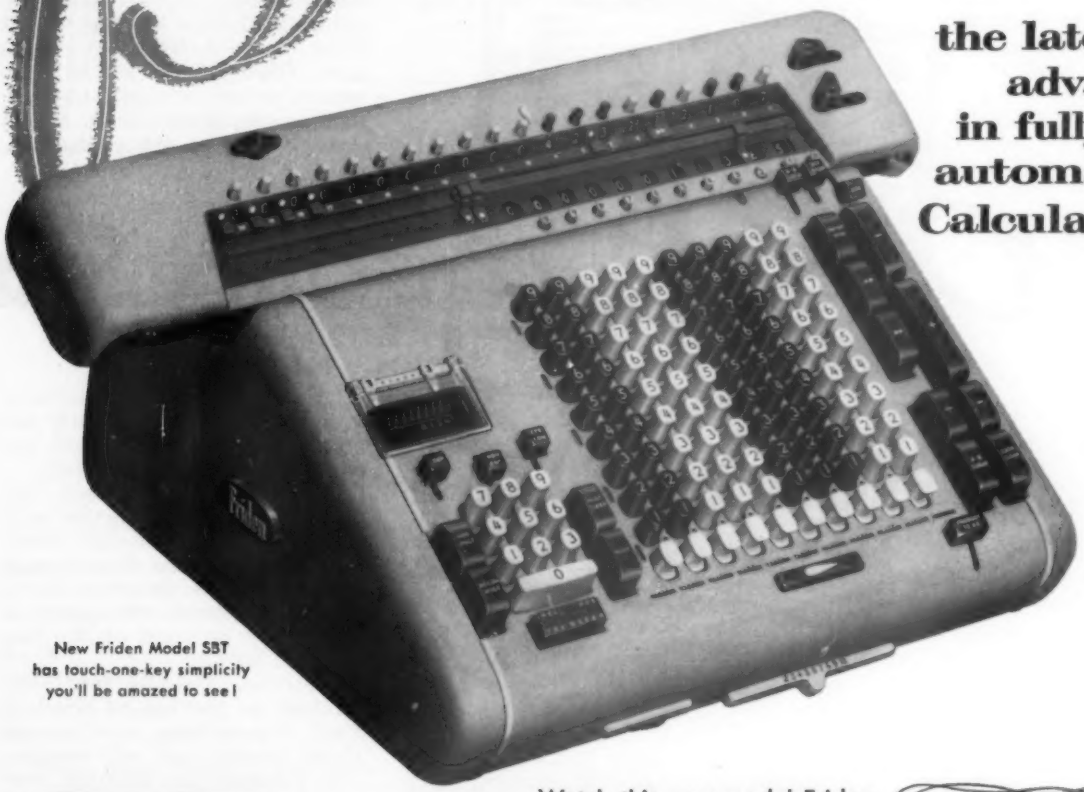

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FRIDEN SILVER ANNIVERSARY • 1934 - 1959

Office Space

Ways to improve office layout can be found by visualizing existing space more accurately. The "overlay" technique described here can aid in this task

BY *John R. Walley*
President
Walley & Associates

THE rapid growth of many business organizations is placing greater demands upon their office layouts. This problem, in some cases, can be solved through better use of present office space. In others, it may be necessary to acquire additional space.

Such improvements or expansions of office layout usually must be approved by committees. Each of these committees requires a detailed explanation of present as well as proposed space usage.

The usual method of obtaining committee approval is to show blueprints of the proposed layout while explaining its features. Inasmuch as committee members are often quite interested but not technically trained, the use of blueprints has the tendency to create hazy or confusing impressions. When this occurs, there is a long time between presentation of facts concerning the proposed layout and the date of decision to adopt it.

A technique to show the need for an improved layout has been developed. This is known as the "overlay" technique whose use eliminates many questions, drives home the need for better space usage, and creates a strong desire among committee members for quick action in adopting a well-planned office layout.

First, it is necessary to define an "overlay" as related to office layout. The overlay is a design placed on a clear plastic sheet. It may be drawn, cut to scale, or consist of ready-made adhesive-backed office layout templates—all in color. Then, and this is where the term "overlay" originates, the design on the plastic sheet is laid over a basic building diagram.

With the overlay in this position, it is possible to show clearly and accurately the present, needed, and best possible office space usage.

When overlays are used, any committee member—whether technically trained or not—can clearly spot advantages and disadvantages between layouts, recognize needs, and quickly decide what action is needed for adoption of the best proposed layout.

There are basically four steps involved in the use of overlays. Each of these steps must be completed carefully and with considerable accuracy. An accurate overlay, when finished and adopted, can be used later in placing equipment into position as well as planning wall or partition changes. The four steps in using an overlay to demonstrate the need for improved office layout are:

1. *Prepare a base board to show the basic building outline.* A basic building outline, essentially showing walls, closets, restrooms, and stairs, is required to illustrate present space. If the building or floor is not now completely used by the agency under consideration, it is well to prepare the outline to show possible directions of expansion if needed. Steps in preparing the base board are described in Exhibit 1.

2. *Show present office equipment layout on the first overlay.* Many times a committee does not really know or understand how present

space is being used—where desks, chairs, and files are located—and so do not appreciate reasons why better space usage or more space is required. Preparation of a present equipment layout drives home the weaknesses existing. Instructions for preparing the first overlay are listed in Exhibit 2.

3. *Develop an overlay showing better usage of existing office space.* Before asking a committee to approve funds for expansion or leasing additional space, a practical, improved layout showing better use of existing space should be developed. If funds cannot be made available, then it is always possible to use an improved present layout. The overlay showing better use of present space must be the very best that can be developed. The steps involved in preparation of the second overlay are the same as those used to illustrate present office layout. The new arrangement of equipment also should be on templates. All equipment in the revised layout, however, should be shown in a different color than that used on the first overlay—perhaps yellow. Then, when the second overlay is placed over the first, different colors will reveal significant changes that can be made to utilize present space. It also may point out such alternatives as moving to another location or acquiring additional space in the same building.

4. *Plan an overlay to show future space requirements at the present or anticipated growth rate.* The exact number of years to plan ahead for space requirements should be as practical as possible even though it will vary with every organization. When planning to appropriate funds for layout changes, therefore, committee members will feel much more liberal when they can see the future requirements and needs. Again, the instructions in Exhibit 2 should be followed. Also, this overlay should be in a different color than the other two. It is through use of this third overlay that the committee can decide on whether better use of present space should be initiated or additional space acquired. The comparison will be between the second and third overlays. If future space requirements have been projected correctly, it will probably mean that the committee will appropriate funds for the overlay showing future requirements.

After completing all overlays, it is well to place the base board and overlays on an easel so that the overlays can be removed and replaced but not damaged. The person presenting the proposal should have cost and related benefit facts at his fingertips as he reveals and explains each layout. He will find that overlays develop a high degree of interest in office layout and that many persons will want to compare the advantages shown on each.

There are five principal advantages to using an overlay in selling an improved office layout to committees:

1. Attention is concentrated on each layout individually, leading to adequate discussion of each.

2. The speaker presenting facts about the various layouts can immediately answer questions as they are raised during the committee meeting.

3. Those who are to approve funds are able to evaluate differences between each layout easily and reach decisions quickly.

4. Use of adhesive-backed templates on the overlays permit last-minute changes that committee members may want to suggest.

5. Upon approval, the overlay accepted can be used immediately in making layout changes, inasmuch as it is designed to scale.

ce Through Planning

Exhibit 1

Preparation of Base Board

1. Cut half-inch celotex building board to 48 by 54 inches.

2. Cut wood backing strip to size 2 by 1 by 48 inches and fasten behind top of celotex board with flathead screws. (Countersink the celotex first so that screwheads will not protrude above surface.)

3. Drill 10 quarter-inch holes spaced four inches apart through the celotex and into backing strip.

4. Cut 10 pieces of quarter-inch dowel 2½ inches long. Apply glue on each dowel and insert in assembly.

5. Cover celotex board with white cross-section paper, using scale as required for the layout. Top edge should be about one inch below dowels. Fasten to board with rubber cement.

6. Fill in building outline showing walls, partitions, doors, closets, stairs, and restrooms now available. Identify each with typewritten, adhesive-backed stickers.

Exhibit 2

Preparation of Overlays

1. Drill 10 quarter-inch holes in each plastic sheet to match the dowels protruding from the base board.

2. Place plastic sheet on base board over dowels. Clamp bottom and sides firmly in place with C-type or other clamps.

3. Using adhesive-backed plastic templates cut to scale show all equipment in its present or proposed location. Use only one color on each overlay.

4. Remove clamps and check layout to see that no equipment is out of place or omitted.

5. Identify overlay with adhesive-backed stickers that explain each piece of equipment and what the layout represents.

$2,500,000 Extra Business —Without Extra Bookkeepers

BY *J. Pryor Wise*
Treasurer
Stratton & Terstegge

HANDLING accounts payable at Stratton & Terstegge Company in Louisville, Ky., is a complex, multimillion-dollar operation. Automation, however, has whittled the job down to manageable proportions. It has enabled the wholesale hardware firm to take on more than $2.5 million worth of additional business in the past year without increasing personnel in the bookkeeping department.

Besides the wholesale business that necessitates warehouse branches in Cairo, Ill., and Birmingham, Ala., Stratton & Terstegge has two manufacturing divisions. The Falls City operation, which occupies a sprawling industrial block behind the main office in Louisville, makes a popular line of minnow buckets and tackle boxes. The Anchor operation, across the river in New Albany, Ind., assembles air conditioners, garden furniture, and fireplace fixtures, as well as furnaces for a variety of uses in home, farm, and industry.

Suppliers' Bills Pour In

Every day, bills pour in from hundreds of suppliers for literally thousands of individual items. It is not unusual for the main office to receive separate bills on the same day from the same supplier for materials purchased by each of the five operations. The company has four monthly pay dates. On just one, July 10 of this year for example, 1,129 checks were written for a total of $1,055,983.

Under the old system, discounts —which vary widely—had to be computed for each invoice. Then they had to be run through an adding machine four times to get totals for the gross, discount, freight and credits, and net. Each total had to be picked up for a cross check. Then the invoices had to go through a separate tab-punch operation to produce account distribution cards.

This multiple duplication has been eliminated by electronically linking the invoice-processing and tab-punch operations. Now, the invoices are handled once by one accounts payable clerk operating a "Class 32" National Cash Register Accounting Machine. When she processes the invoices, the information is automatically translated by a card-punch coupler unit into electronic pulses that simultaneously activate a card-punch machine. A by-product of this new system is that the accounting machine feeds data for the card punching far faster and more accurately than it could be indexed by an operator producing tab cards manually.

Incoming Invoices Checked

Incoming invoices are checked by the buying department and stamped to show that the price is correct and that extensions have been carried out properly. A notation is also made as to the freight terms—some terms require the vendors to pay this charge, some don't—plus the due date and payment terms.

When the invoices reach the accounting department, they are sorted into alphabetical order, date of payment inserted on each invoice, and account distribution card or cards bearing the name and a numerical code number for each vendor is then pulled from the tab file. On some invoices, such as telephone billings, there are as many as 15 different distributions. Interfiled with the distribution cards are the credit or pay cards from which the check is written. One of these is pulled for each invoice. The invoices are then ready for posting.

Cards Punched in Posting

In the posting operation, the accounting machine punches the cards, starting with the rate of discount, invoice date, due date, vendor's code number, entry date, and one and sometimes two gross totals which vary according to the type of discount.

The information is printed on the back of each invoice as proof of distribution and each line is "zero proofed" against the credit amount entered from the face of the invoice. If an error has been committed in transcribing this entry, it shows up immediately. At the same time the machine is processing the invoices it is sending pulses to the card-punch coupler to activate the card-punch machine and is producing a continuous journal, or proof sheet. END

New automated accounts payable system is designed around bookkeeping machine linked to card-punch machine through a card-punch coupler. One operator handles the tandem setup

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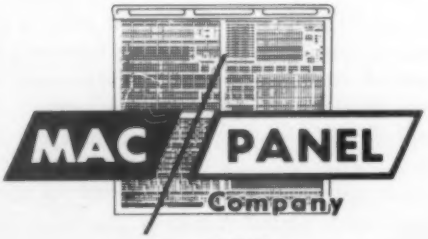

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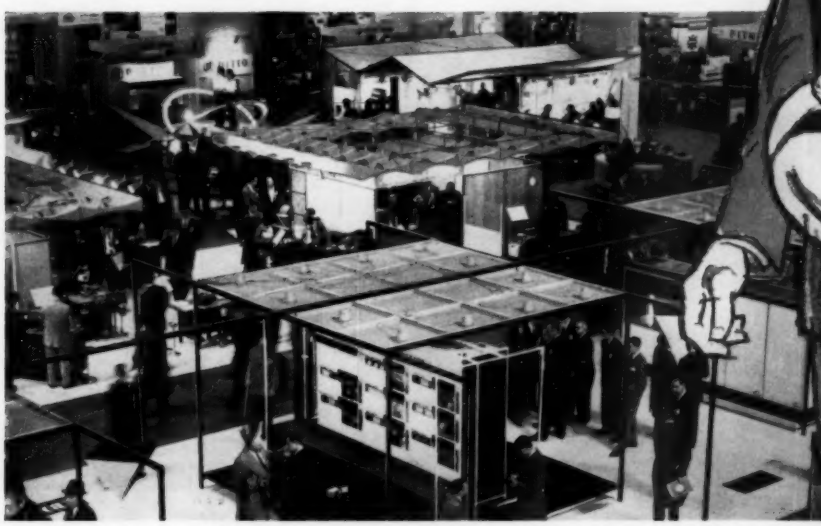

The largest and most important show of its kind, this year's National Business Show will be of more value and will offer more of interest to business executives than ever before.

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'Break-Through' in Data Processing

BY *J. Allan Rhea*
News Editor

The four units of the B251 Visible Record Computer as shown here are: sorter-reader (left background), computer cabinet (right background), record processor (center), and control console (foreground)

A NEW method of electronic data processing was unveiled by the Burroughs Corporation at its Paoli (Pa.) research and development center. At a special press conference there, Burroughs demonstrated the B251 Visible Record Computer (VRC), the world's first data-processing system able to "read" and print the same language read by the human eye.

The revolutionary feature of the VRC is that it can process information directly from checks, deposit slips, and other documents of varying thickness and size without first transcribing that information to cards or tape. The elimination of this intermediate step constitutes, in the words of Burroughs President Ray R. Eppert, "a major technological break-through."

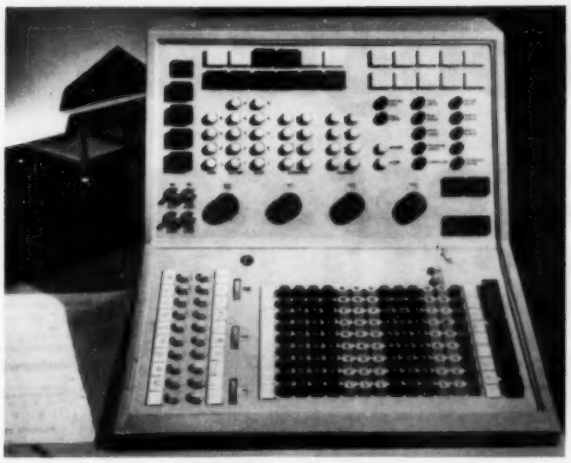
The system utilizes Magnetic Ink Character Recognition (MICR), the term for numbers that can be read by electronic machines as well as by people. These small numeric characters, printed in magnetic ink across the bottom of bank checks and deposit slips, trigger the system into operation. MICR was announced last winter by the American Bankers Association as the "common language" of the industry.

The Visible Record Computer, which is scheduled for delivery early in 1961, will be used first in banking. The American banking industry, handling more than 12 billion checks a year in addition to its other operations, has what has been described as the "largest data-processing problem in the world." The field of banking and finance was selected as the first application of the VRC since all business involves payment transactions. It may be used later in insurance and eventually in retailing and other industries in which accounting can be automated profitably.

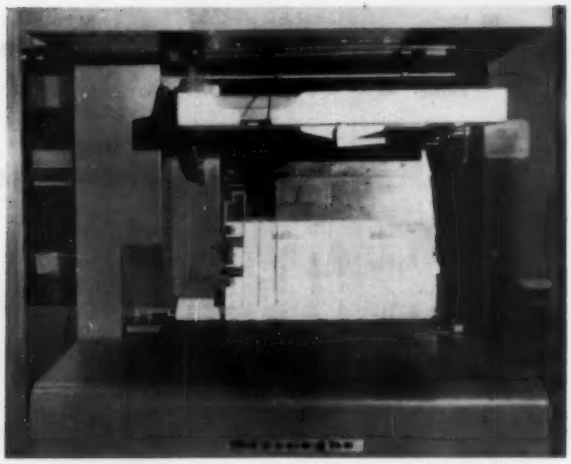
Four units comprise the system. The first is the sorter-reader, a solid-state device announced by Burroughs last March. This machine sorts and reads checks, deposit slips, and other bank media at rates of up to 1,560 items a minute through the means of magnetic ink characters printed on each item. These include the account number, amount, and other required information.

The second unit is the computer itself, a completely transistorized machine which is the nerve center of the system. The computer performs all decision-making functions and directs the other units by means of programmed instructions contained on Mylar plastic tapes.

Office equipment manufacturers will spend hundreds of millions of dollars this year on research and development programs for business machines and systems. These projects are under way at laboratories throughout the country. An *American Business* editor visited one recently, the Burroughs R&D center near Philadelphia. Here is his report of the unveiling of a new system



Control console of B251 electronic data processing system is the fourth unit of the system. One person can operate the console



The 160-character printer prints ledger and statement forms at the rate of 180 lines a minute. The auxiliary stacker is above the printer

More than 2,500 programming instructions can be stored at a time.

After the computer has processed the information, it is sent to the third unit, the record processor. Here items are automatically posted on ledger and statement forms, proved, and the customer's current balance computed and printed. These forms are printed by a 160-character printer at the rate of 180 lines a minute. An auxiliary stacker segregates ledgers requiring special attention.

The Visible Record Computer is controlled from a console, the fourth unit of the system. This unit consists of a numerical data keyboard, entry control keys, changeable identification strips, a register display panel, program dials, and control lights. The console indicates the status of the computer and is used by the operator to select or modify programs. Working from the console, one person can operate the system to full capacity.

Burroughs spokesmen estimated that a single VRC could perform all the bookkeeping and statistical analysis functions of a bank handling 15,000 items during a 12-hour day. This includes check handling, proving, bookkeeping, and preparation of customers' statements and bank records. Multiple VRC systems may be used in larger banks.

In addition, the Visible Record Computer can be adapted to checking and savings accounts, installment loans, mortgages, and other accounting operations. As a by-product of processing operations, the computer system will provide accounting and statistical data needed for management decisions, such as analyses of accounts which are inactive and therefore unprofitable.

An engineer holds a Mylar plastic tape (left hand) and a transistorized printed circuit board (right hand)

Instructions can be given the system to reject checks on which stop-payment orders have been placed and to refuse payment of checks if an account is overdrawn. It also can accomplish bank transfers, compute and post service charges, and accumulate trial balances at the same time.

Solid-state construction has been utilized throughout the VRC. Some 5,500 transistors replace the vacuum tubes used in earlier computer systems. The magnetic core memory is stored in packets, each with a capacity of 10 computer "words," and the system is capable of performing 4,000 arithmetical functions a minute. Construction of the VRC has eliminated the need for specially built rooms, air conditioning, and humidity controls required for most computer systems.

END

Some of the 37 exhibitors at the Business Equipment Exposition are shown assembling their displays. The four globes depict visually, in terms of time, space, and motion, the shrinkage of the earth since 1492. To the left of the globes is the "Project Mercury" capsule, shown publicly for the first time

The $4-billion-a-year business equipment industry recently held, for the first time, its own national exhibit in the National Guard Armory, Washington, D. C. Below is the report on that exposition by the editor of *American Business*

Business Equipment Industry Stages Inaugural Exhibit

BY *Charles F. Johnson*
Editor

WASHINGTON, D. C.—Office Equipment Manufacturers Institute's first Business Equipment Exposition was opened in this city on September 22 when a large plastic globe was illuminated by a signal intercepted from Russia's Sputnik III and converted into energy.

The three-day show used no other foreign power. Its 37 exhibits, in fairly spectacular settings on a commodious two-acre exposition floor, presented evidence aplenty of the technology of the American industry "that serves all industry."

25,000 Visitors Invited

Some 25,000 visitors, who came by invitation only, and who included the diplomatic, military, and commercial representatives of many foreign countries, saw the latest equipment and systems of companies doing 90 percent of the Nation's $4-billion-a-year office equipment business.

The exposition, which will commence a continuous, transcontinental "road show" on a soon-to-be-decided itinerary, featured opening-day speeches by Roy W. Johnson, director, Advanced Research Projects Agency, and Fortune P. Ryan, president of OEMI and executive vice-president of the Royal McBee Corporation. A letter was read from President Eisenhower, who wrote in part, "It is appropriate in turn to salute an industry which, through continuous development of better office machines, plays a vital role in our daily work."

Hollerith Machine Exhibited

Washington was an appropriate place in which to inaugurate the industry's own exposition of its products. For it was in this city in 1890 that there was designed and constructed the machine that compiled and tabulated facts for the census of that year. Herman Hollerith, a statistician for the Census Bureau, realized that the seven years' time required to digest and arrange facts from the 1880 census was too long, so he constructed the pioneering machine that used punched cards and mechanical counters to sort and process census data.

That machine, borrowed back from the Smithsonian Institute, together with a 1910 "second-generation" vertical card sorter, was part of the International Business Machine Corporation display. IBM long since had absorbed Hollerith's Tabulating Machine Company. Mr. Hollerith's son and two grandchildren were visitors to the exposition.

Highlights of Exposition

It would take a lengthy report to encompass even the highlights of the show. Several days of listening to and watching demonstrations, most of which were extremely clear and well done, and talking to exhibitors and visiting specialists, did leave several distinct and possibly important impressions.

One is that the industry is building more and more business machines that can offer the benefits at one time confined only to very large corporations with enough money to afford electronic computers and enough paperwork to justify the expenditure. "Electronic computers threatened to become a corporate status symbol," one ex-

hibitor confessed. "One president would hear another bragging about his at the country club and the next morning would haul his controller in and say, 'Joe, we have to get one of these electronic computers.' Joe would get one—and then just about go crazy trying to find work to keep it busy." For many, many companies, tabulators will do a fine job of calculating and processing data.

Another impression is that the *total* systems approach, which demands an integration of several different types of equipment, frequently from different manufacturers, is drawing an increasing response from manufacturers. Pitney-Bowes and National Cash Register Company displayed an electronic "sorter-reader" capable of saving as much as 35 or 40 percent of bank bookkeepers' time. While not new, the Friden exhibit contained a Flexowriter-Computyper working in tandem with an IBM card punch.

As office management—with the equipment available to it—becomes more and more "sophisticated," it will necessarily correlate and integrate more and more corporate work areas. Linkage of different manufacturers' equipment will grow as will joint projects such as the Pitney-Bowes, National Cash Register response.

Display Linked Equipment

This linking together of two manufacturers' equipment and the development of simplified, low-cost data handling were demonstrated by the ComptoCard machine introduced by Comptometer Corporation. Used in conjunction with an IBM key punch machine, the ComptoCard combines calculating and key punching in one operation. The company considers it will solve many previously impossible problems. The unit is small enough to be placed on a standard desk top. For those requiring tape preparation, the ComptoTape was designed.

Some of the glamour has been rubbed off "management automation," whatever that is. Also, not a few people within the industry recognize that the drive for faster and faster equipment could result in dangerous excesses. "In my own organization, I get too many reports," the president of one office equipment company confessed to me. "Heck, I'm 'figured' to death. I think that in the next decade there will develop a great thirst for simplicity, a thirst for generating the data that a company just *has* to have, and only that data. Simplicity, simplicity, significance, significance—from beginning to end of the paperwork and information-handling cycle."

The exposition revealed a characteristic of the office equipment industry that would have been evident anywhere, but that was emphasized by Washington's military milieu. This is that the industry is making many contributions to national defense in space technology. Not in the role of fabricating rocket and missile parts, though there is some of this, but in utilizing calculators and other office-related equipment.

On public exhibit for the first time were two products of Clary Corporation. One was a "little giant" computer that, by performing a series of rapid and highly involved calculations, recently kept scientists informed of the speed and position of a rocket during a recent "moon shot." The other Clary product was a compact electronic printer for producing data during count-down of the Navy's submarine-launched Polaris missile.

Machine Programs ICBM

The role of Burroughs' data-processing equipment in the guidance of the Atlas intercontinental ballistic missile was also explained. First the Burroughs equipment programs the projected trajectory of the ICBM and feeds this into the missile. Once the flight has begun, data of the missile's actual trajectory are recorded by radar and fed into the Burroughs data-processing system which calculates variances from the programmed flight path and necessary corrections, which are then transmitted to the Atlas. This telemetering process continues until final corrections are made and the nose cone separates for its lonely climb through space and final plunge.

"The business machines industry is a member of a family of American industries that is primarily responsible for our present space posture," Mr. Johnson told the opening-day gathering. ". . . Although we normally think of sophisticated electronic equipment in terms of missile and space systems, computers are also finding their way to the foot soldier. The new Pentomic Divisions of the Army will employ combat computers to receive, store, and evaluate masses of battlefield information," he disclosed.

Perhaps the most striking purely personal impression of the exposition was the very high quality of salesmanship displayed. Some of the bright young men manning the spaces were specialists from headquarters, to be sure. But the vast majority were borrowed from the companies' regular sales forces in the Washington area.

Salesmen Better Informed

Except for photocopying and dictating equipment, furniture, and similar things, the average visitor is pretty much at a loss to understand what is going on behind the blinking lights and/or clicking keys of the consoles. (Even the principles of Hollerith's 1890 tabulator were not too easy to comprehend!) Salesmen who apparently understand electronics and are plainly quick to grasp the particular system requirements of questioners are the rule rather than the exception. As one who has been visiting such shows on and off for 12 years, this increasing competence and polish of salesmen is striking indeed. It leads one to wonder where companies recruit and how they train such professional salesmen.

From all reports and all the evidence, the first Business Equipment Exposition was a success—for those who came as well as for those who displayed. "The most beautiful show I've seen," commented one advertising manager, who had spent more than a quarter-century in the business. "And apparently the most productive, too. Our Washington office had four calls this morning on a piece of equipment that we won't have in the distribution channels until next January."

Rudolph Lang, who had been managing director of New York's National Business Show for the past 10 years and who wrote the book about trade shows, *Win, Place and Show,* is managing director of the Business Equipment Exposition. It is an important milestone in the development of the 80-year-old industry that OEMI is producing its own show. The whole industry had been spending about $20 million a year on 385 shows, many of them minor, and just about all arranged and controlled by local office management groups; in effect, customers of the industry were directing its expositions. The good shows of this type will surely survive. They have been mightily augmented by the industry's own.

END

New Method Simplifies Route Salesmen's Bookkeeping

BY *A. G. Forbes*

Not only money lost through errors in manual transcription but also the cash value of time lost through trying to track down such errors was a problem for Hohneker's Dairy, a wholesale firm in North Bergen, N. J. By changing to a peg-strip processing system, the company has saved time equivalent to an office clerk and a half, reduced the drivers' time spent on bookkeeping by 33 hours each week, and effected savings of more than $10,000 a year during the three years that the new process has been in use.

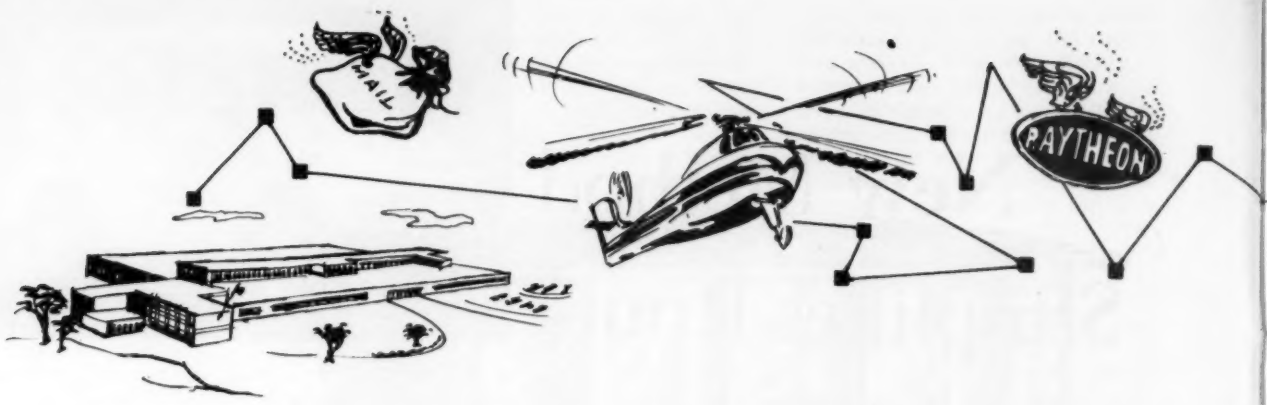
Because such a system is adaptable to many other lines of business where errors made by outside employees cause loss of time and money at the office level, the case is reported in detail as follows:

The problem of clerical errors made by route salesmen is not confined to the dairy industry. It is an expensive and time-consuming bookkeeping bottleneck to many other businesses as well. The peg-strip accounting system outlined in the accompanying article can solve this problem and provide better management control over sales operations at the same time

Before Hohneker's Dairy installed a peg-strip system, each of its 11 drivers was spending at least an additional half-hour a day after completing his deliveries in transcribing data from the copies of the customer invoice to a recap sheet. This operation was needed to cumulate quantities sold and make price extensions to arrive at the total value of cash and credit sales on the route.

If there were errors in transcription from the invoices to the recap, or if price extensions were incorrectly made, a great deal of time was wasted by the account clerk in tracking down the error. The individual driver's accounts were often out of balance until proved by the billing clerk. Statements were prepared by transcribing figures from the recap sheet to separate customer account sheets,

(Continued on page 38)



RAYTHEON SPEEDS

BY *J. P. Purcell*
Manager, Mail Department
Raytheon Manufacturing Company

LIKE many other expanding business firms, Raytheon Manufacturing Company is having growth problems as applied to that old communications bugaboo—the intercompany mail avalanche.

With as many as 500,000 pieces of mail going through its central mail office during some peak days (approximately 20 percent of this representing United States mail), the sorting and delivering problem had risen to the point where new handling methods and procedures were needed.

Over the years, Raytheon has mushroomed from its manufacturing area in Waltham, Mass., to surrounding cities and towns. Its divisions (13 now) have grown so fast that major subdivisions are being formed to avoid top-heaviness.

The Government Equipment Division, for example, has just exploded into five main subdivisions:

1. Submarine Signal
2. Airborne Electronic Equipment
3. Systems Management
4. Heavy Electronic Equipment
5. Santa Barbara

With the exception of this last division in California, all the others are involved in varying degrees with the local intercompany mail situation.

While Raytheon has not adopted the pneumatic tube type of message delivery service which, incidentally, has been brought up to date and expanded in some companies lately, or to facsimile or closed-circuit TV as yet, it has initiated some noteworthy moves in the communications field.

To insure speedy delivery from central mail headquarters to plants in such other Massachusetts locations as Wayland, Andover, Lowell, Bedford, Maynard, North Dighton, Newton, Quincy, and Needham, a fleet of six station wagons is in operation on a full-time service basis. Supplementary mail facilities handle intercompany mail at 45 of these perimeter locations. Deliveries are made to plants employing a single mail clerk and to plants where up to 20 clerks are necessary.

Company Trucks, Planes Used

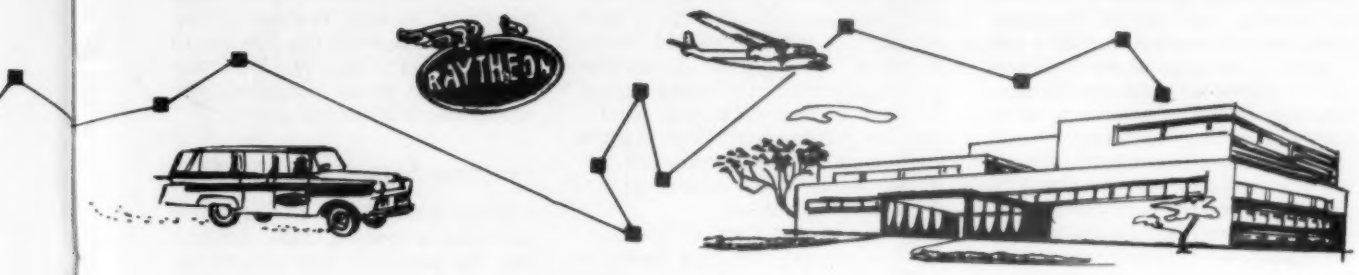
In addition to the fleet of station wagons, Raytheon also depends upon some company truck and plane delivery to its installations in other states, notably those in New Hampshire and Tennessee. Regular Tuesday and Thursday schedules have been set up for such deliveries. In the event that there is a fairly large quantity of out-of-state mail involved, all of it —intercompany and U. S.—is packaged in large envelopes and sent by first-class Government mail to certain locations outside Massachusetts. On arrival, it is sorted and delivered in the regular way.

Fortunately, one of the factors which simplifies control over intercompany mail at Raytheon is that a comparatively small percentage of the company's personnel receives a very large proportion of the mail—something in the order of 90 percent of the mail going to 20 percent of the personnel.

As in other companies, the leather bag or pouch for handling of mail between central mail and nearby plants and office buildings is gradually giving way to the wheeled cart. Today, there are three small routes which are still serviced by carriers wearing shoulder-strap bags, plus a few others in buildings where the wheeled cart has not as yet caught up.

At its central mail office, Raytheon employs as clerks eight girls and three boys whose average age is 18 and who work a full eight-hour shift on the job. Among these are clerks who know the surrounding areas and routes and can take over these routes when regular messengers are absent. Outgoing mail is handled by these clerks, using Pitney-Bowes automatic mail machines.

From the industrial psychology standpoint, the attitude of mail sorters and handlers is important. To maintain a high morale level, the central mail office building has been air conditioned, the physical handling routine has been streamlined (pipe racks to hold regulation U. S. mailbags have been added), and a special area for mail



S INTERCOMPANY MAIL

"Neither snow, nor rain, nor heat, nor darkness, are permitted to obstruct their speed," wrote the Greek philosopher Herodotus. His description was adopted by the U. S. Post Office Department and applies as well to the mail department at Raytheon Manufacturing Company. The accompanying article tells how this nationwide firm handles its intercompany mail avalanche

addressed just to Raytheon has been designated.

Time-and-motion studies indicated that fatigue could be lessened by introducing special posture chairs. These chairs were added to take the clerks off their feet and to increase efficiency by creating better working conditions.

Intercoms were installed so that during the din and hum of mail sorting and processing it is possible to talk with any employee—and be heard.

Besides the pipe rack and a new stacking table which provide more bench room, desks have been rearranged to provide more space without increasing the occupied floor area.

Schedules Revamped

Other improvements include careful revamping of pickup and delivery schedules, as well as redistribution of some personnel for the best handling of mail. Increasing the frequency of delivery between some locations without increasing the cost of delivery also has been arranged. These moves constitute a continuing process which looks toward future improvement.

Test form letters have been sent to determine how long it takes a piece of intercompany mail to reach a certain point. The test letter form includes such data as employee's name, location of box from which sent, time, and date. The recipient of test mail fills in such information as time received and returns it to the sender, thus completing the test study cycle. The results of time-and-motion studies like these have tended to increase efficiency.

Even with eight different styles of intercompany envelopes—plainly marked to handle various types of mail—the usual problem of incorrectly or incompletely filled out envelopes remains. To offset troubles like this, special memos are released by the mail department. The latest, dated August 4, 1959, entitled "Use of Envelopes," goes into the matter of wrong use of envelopes, points out proper methods, and concludes: "In the event that you have questions on the most effective means by which to dispatch your mail, contact your local mailroom or the mail department, on Waltham extension 3463."

To cope with the problem of employees who have been promoted out of a department or transferred elsewhere (entire divisional sections have been rapidly relocated on occasion), there are several solutions.

Each week, central mail receives lists from "personnel" of "New Hires," "Transfers," and "Terminations," which contain up-to-the-minute information. Mail clerks and messengers in each building report address changes on 3- by 5-inch index cards. Carriers make periodic rechecks of the data on these. Change-of-address data also feeds in from timekeeping, from the intercompany telephone office, and from individual department heads.

A tracing procedure enlists the support of local mail carriers, use of the intercompany telephone book and, as a last resort, direct checks with the telephone office, personnel, and timekeeping. The last group provides helpful IBM lists.

Alphabetical listings of all personnel in each building is maintained at central mail. Changes are made according to reports on the index cards feeding back from local carriers and clerks.

A form from the department of office services is very helpful. It lists more than 100 geographic locations in the company from which mail can be expected to come and go. The list is provided monthly.

Paralleling central mail's efforts to deal effectively with the intercompany mail problem is a move to increase the use of Teletype, some use of closed-circuit TV, and a possible message center type setup in which a clerk would take messages by telephone, type them out, and arrange delivery.

It has been ascertained that of the 39 company locations tied in point to point by Teletype service, at least 12 can handle special announcements, bulletins, and even some personal messages. It is estimated that service of this kind will, in some areas, result in cutting down intercompany message delivery time from one or two days to approximately 12 minutes.

Admittedly, the present system of bulk pickup of such printed material as bulletins, memos, circulars, etc., is wasteful and time-consuming from the distribution standpoint. Frequently, too many copies are run off because one group is unfamiliar with the precise copy requirements of another group in another division.

With the installation of a conference-type Teletype setup, however, the various divisions will receive the messages by individual TWX. It will then be an easy matter for personnel at the local level who know precise key personnel counts to type up masters and run off the number of copies needed.

Teletype Network Planned

Six teletypewriters are already hooked into this kind of communications network. Six more may be tied in soon and eventually all Raytheon locations may be tied in. Circuit No. 1, for example, would hook up corporate departments and division headquarters. Circuit No. 2 would tie in divisions to plant and laboratory locations.

Such a Teletype "conference" could be especially helpful when, for example, Raytheon's publicity manager wanted to release a press announcement regarding the appointment of a new vice-president. Key people oftentimes complain that they do not hear of such appointments until they read about them in the newspapers. To overcome this, intercompany Teletypes could be activated along with the machine sending the information directly to the press services. In this way, personnel would receive the copy simultaneously.

In other instances, divisional locations would be alerted in advance that "The following information is being released to the press on noon Wednesday." A message of this nature could be picked up in minutes, the decision made as to how many key people should know about it, then photostat, mimeograph, or other duplicating means enlisted to reproduce and distribute the information. With such a conference circuit ready at all times, some 30,000 words a day could be transmitted.

It is expected that with expansion of present Teletype facilities at Raytheon, special mail, utilizing expediters and other special means of transportation, will be eliminated.

Further, and even more important from the communications cost standpoint, is Raytheon's contemplated future use of its own microwave equipment to provide private service in telephone and Teletype communications.

Study Microwave Use

Under a recent FCC "Limited Privacy User" ruling, new bands have been opened up in this field. Raytheon may take advantage of this ruling and the already existing microwave equipment to handle about 240 trunk systems. In turn, this can be connected to switchboards for private telephone use, or to as many as 20 Teletype channels capable of activating hundreds of Teletype machines.

By this special means, it will also be possible to key off on one Teletype machine or on all of them for conference calls, thus cutting down materially on interdepartmental mail.

If the move goes through, Raytheon will be the first electronics company to put into use its own microwave system to serve as the carrier link between plants. END

Route Salesmen's Books

(Continued from page 35)

and on occasion this process caused delays of from two to four days in mailing the bill to the customer.

Reporting the amounts of various dairy products sold, as required by the Office of the Milk Industry and the Federal Market Administrator, was a monthly struggle. About half of the time, the clerks assigned to the route accounting and billing function needed extra help from a clerk who had been hired primarily for other duties.

It was apparent to management that some system must be found for saving time, reducing errors, and improving control of the route operation. Systems engineers from The C. E. Sheppard Co. (Cesco) of Long Island City, N. Y., were called in to assist Hohneker personnel in studying the problem.

Peg-Strip System Prescribed

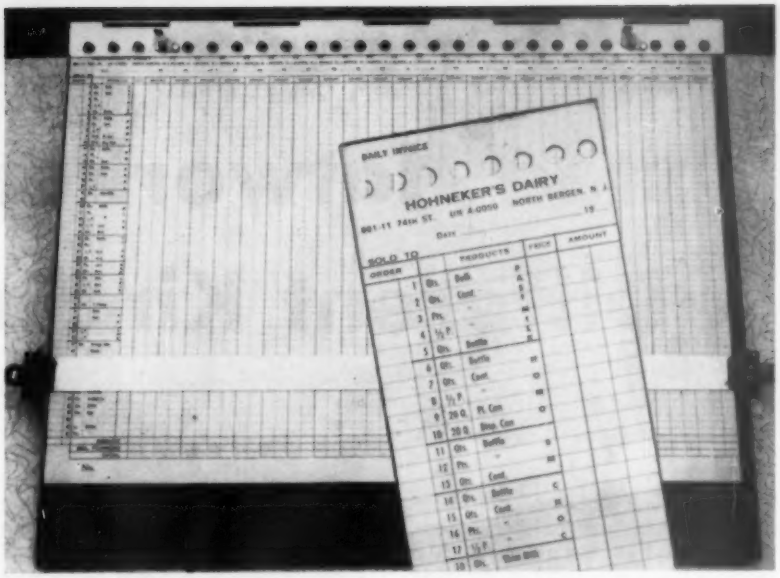
Their analysis of the situation indicated a made-to-order application for peg-strip data processing. This method speeds up cumulation of figures through the use of a summary board with fixed rows of pegs across its top, on which preprinted and prepunched identical forms are placed. This permits accurate collation of the series of forms so that comparable figures on each form are exposed side by side by laying one form over the other horizontally in a staggered position. This step is called shingling. A sliding line-finder attached to the board makes it easy to cross-add the aligned data common to each form and to produce a total.

By adapting this principle to the Hohneker Dairy problem, Cesco systems engineers were able to design a set of forms for handling the route accounting and billing which eliminated the need for drivers to spend time posting to a recap sheet and transcribing to detail accounts by billing clerks. It has enabled the dairy to get along with two full-time accounting clerks instead of three.

Clerk Freed for Other Jobs

Additionally, the clerk who had been spending half of her time assisting in the control and billing function is able to devote all of her time to other duties. Reports to the O.M.I. and the Federal Market Administrator are prepared without pressure and on time. Customer bills go out promptly at the end of the week.

The system is built around a daily invoice form, a weekly invoice (both are in three parts, color-keyed for disposition, with carbons between each), and a two-part summary form. The first function of the summary sheet is to serve as the loading order for the warehouse. Using the carbon copy of the previous day's summary sheet for the count of unsold items remaining on the truck, the driver indicates additions or reductions in the appropriate columns and enters net quantities in the extreme left-hand column.



The peg-strip accounting summary board contains a row of pegs across the top, on which preprinted and prepunched forms (foreground) are placed. This permits accurate collation of a series of forms.

As he makes his deliveries, he prepares an invoice for each customer by entering the quantity sold, unit price, and amount of sale in each category. If it is a cash sale, he enters the total cash collected at the bottom of the invoice. The customer receives the original and the two carbon copies are retained by the driver. The office copy is used for data accumulation and the audit copy is retained for reference whenever individual account details must be checked.

Driver Computes Business

Upon completing his route, the driver removes from the truck damaged and unsold merchandise which cannot be carried over to the next day and enters the quantities in the "returned" column of the summary sheet. Merchandise remaining on the truck as the beginning inventory for the next day's deliveries is counted by the driver and posted to the "truck" column on the summary charge sheet.

The driver then shingles the office copies of the daily invoice forms from left to right on the summary board and accumulates a total of quantities sold to cash and charge customers. He enters the charge totals in the "quantity sold" column of the summary charge sheet. Cash totals are posted to the "net cash" column. Shingling the invoice copies from right to left on the summary board enables him to cumulate total cash collected, which must agree with the cash turned in. This amount is entered in the "collected" item at the bottom of the summary charge sheet.

After all of this information has been accumulated, the driver adds for each product the three quantities in the cash, charge, and truck columns to arrive at the total quantities with which he is charged and enters it in the "net received" column on the summary sheet.

Now that both the driver's cash and quantities have been accounted for, he is no longer concerned with the accounting. He retains the carbon copy of the double form for use in making up his loading order for the next day and turns the original over to the accounting clerk.

The account clerk posts unit prices of cash sales to the "price" column on the summary charge sheet and makes the extensions to total value. She then shingles the office copies of the individual invoices to arrive at route sales by categories, which must agree with the values shown on the summary charge sheet.

As billing time approaches, daily invoices for each charge customer are shingled on the summary board, and quantities and amounts cumulated and posted to the weekly invoice. The first copy becomes the customer's bill. The daily summary of charge quantities are cumulated on the board and posted to a recap sheet, priced and extended to get a route total. The totals of all customer bills for the route, as cumulated on the summary board, become a verification of individual bills when compared with the recap total.

Totals for the entire operation of 11 routes are easily cumulated on the summary board by shingling the summary forms for each route. These also provide the basis for the reports to the O.M.I. and the Federal Marketing Administrator.

Close Control Maintained

The outstanding advantage of this system is its ability to maintain close control over the entire operation at all times. The precise alignment of the forms made possible by the summary board, coupled with the line-finder, reduces cumulating errors to a minimum by allowing one clerk to perform the machine addition directly from the source data without the necessity of recopying. If errors exist in the original data, they are easily tracked down and there is no need for performing intermediate operations on subsidiary papers which easily become lost.

After more than three years of continuous operation of this system, the company is more than pleased with its effectiveness and is considering extension of the system to still other phases of its operation. END

The United Hatworkers: A Different Kind of

BY *Irwin Ross*
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ON July 9, the board of directors of the Merrimac Hat Company, Inc., met in New York, noted that it had made a substantial profit during the previous five months, and declared a dividend of 50 cents a share for the year's first quarter. Hardly an unusual occurrence—yet the news made the front page of the *New York Times*. The reason: Merrimac's principal owner is the labor union which represents its employees. And thereby hangs a tale.

By 1958, the Merrimac firm, the country's largest manufacturer of women's fur felt hat bodies, had been in existence in Amesbury, Mass., for over a century. Normally a profitable enterprise, it lost $150,000 in the first five months of 1958. In November it closed its doors and its controlling stockholder announced that he would liquidate the business unless he could sell it intact before January 1. This was calamitous news for Merrimac's 325 workers, many of whom had spent a lifetime in the trade and had no other skills.

No purchaser could be found in the brief period allowed. At this point, Alex Rose, president of the United Hatters, Cap and Millinery Workers International Union, urged that his union buy the factory. It was a startling proposal, but there was logic to it. Merrimac was no economic weakling. Its losses in 1958 were largely due to temporary factors. Why shouldn't the union risk a novel experiment in defense of its members' interests? As Rose has since said, "It doesn't make sense to me that a union will spend money for a strike but not to save jobs. A union can't simply live by the old formulas."

And so a new corporation was set up. The union bought $300,000 worth of stock; another $100,000 was taken by two business firms which deal with Merrimac; and $70,000 was subscribed by Merrimac employees and other Amesburyites. Ninety-nine percent of Merrimac's workers invested in the company, the average stock purchase being $250.

Labor and management mix at Merrimac board meeting. Left to right: Joe Dollen, a Merrimac worker; Union President Alex Rose; Company President Hans Rie; Union Secretary-Treasurer Marx Lewis

Management Still Manages

As the principal stockholder, the union occupied six of the nine places on the new board of directors. It retained Merrimac's old management, headed by President Hans Rie. Before the plant reopened on February 2, the union assured Merrimac's competitors that the firm would get no advantages in wages or working conditions. Normal collective bargaining prevails and Merrimac has to meet industry-wide standards. The workers still work and management manages.

And business has been excellent. From February through June, Merrimac made a profit of nearly $70,000. Several developments favored the company. Expensive executive and administrative staffs were reduced, to cut costs. Then, to diversify its markets, Merrimac began to make a large quantity of men's as well as women's hat bodies. Renewed popularity of velour hats, a Merrimac standby, also boosted sales. Net result to date: the workers' jobs are safe and they can also anticipate a decent return on their investment. As the *New York Times* commented, when the experiment began: "Karl Marx must be turning in his grave."

The Merrimac story typifies the approach of one of the most enlightened, farsighted unions in the land. The United Hatters enrolls

Merrimac hat body plant at Amesbury, Mass., reopened by union investment. This is one of two plants now in full operation

Union

a mere 38,000 members, but it compensates in daring and imagination for what it lacks in numbers. But what really has distinguished this union from many of its fellows has been the broad-angled vision of its responsibilities. It has restrained demands for wage increases when the employers could not afford them, used its own money to save firms from bankruptcy, prodded the millinery industry into spending over a million dollars to promote its products.

Alex Rose, a tall, bespectacled, soft-voiced man of impeccable grooming, has led the union since 1950. Now 61, Rose came to this country from Poland at the age of 15, worked in a millinery factory by day, studied by night. An idealistic youngster, he quickly became a union enthusiast, and has been a union officer since 1924, working seven days a week. The Merrimac venture is several worlds removed from the rough days through which Rose and his union struggled in the late 1920's and early 1930's.

Beginning in 1928, the millinery branch of the union simultaneously had to fight communist efforts to take over the leadership, and hoodlums hired by employers to keep the union out of their shops. For four years guerrilla warfare was waged in New York's millinery factories, with strikes, sluggings, and bloody street skirmishes. Rose himself, then secretary-treasurer of Local 24 (operators and cutters), was beaten up in the lobby of his New York apartment house by two burly underworld characters. But by 1932 the union had won out: the canker of communism had been removed, and 90 percent of the industry in New York had been unionized. By the early 1940's the United Hatters had consolidated its position throughout the country.

Its national upsurge dates from this period. With power came responsibility. The leaders early saw the advantages of a stable and peaceful relationship with the industry—as indicated, for example, by its record in the New York "market," which manufactures the bulk of the Nation's millinery.

26 Years Without Strike

For 26 years, from 1932 to 1958, the New York millinery industry did not suffer another general strike. During the course of successive collective bargaining agreements, all strikes and lockouts were outlawed, all unresolved disputes submitted to a permanent arbitrator. Nor did the union exert the vast economic pressure it possessed to bludgeon employers. In both 1942 and 1952, when it was negotiating new agreements, it decided that the manufacturers could not afford higher wages and without fuss withdrew its original demands. In 1938, while its contract was running, it voluntarily proposed a wage cut, in the belief that the New York market was in an unfavorable competitive relationship to the rest of the country.

Early in 1958, New York's long no-strike record was broken by a nationwide five-day walkout of 22,000 workers—in large part designed to raise standards in various millinery centers and to stop wage "chiseling." The strike, planned to impress the syndicates and to stiffen manufacturers' resistance to their demands, resulted in substantial increases in wages and fringe benefits.

A good many problems in the headgear industry derive from its small-scale organization. A comparatively small number of large companies manufacture men's hats, but the Nation's caps and millinery are produced by many hundreds of shops, some of which have as few as ten workers. One hundred is a fair-sized work force. The union thus finds itself in the anomalous position of being the strongest element in an atomized industry. How it has exercised its leadership has been the measure of its statesmanship.

Traditionally, unions regarded the economic fate of any individual employer as a matter strictly of his own concern. Alex Rose and his colleagues take a different view: If a company is economically sound, it deserves a helping hand when in temporary difficulties. Thus, over the past five years the union and its members have loaned $539,017 to employers who otherwise faced collapse; another loan went to help finance a new firm.

Charles Kartiganer has special reason to feel grateful to the union. In 1954 he was one of the largest millinery manufacturers in the country. But he had made a miscalculation in 1952 which threatened ruin. He had bought an old hat factory, and by the time he finished re-equipping it he had spent $400,000 rather than the $150,000 anticipated. Then in 1954, the millinery industry went into a slump, Kartiganer's sales declined and he suddenly found himself short of operating capital and hard-pressed by his creditors. He furloughed all but a skeleton force of his employees; to the union it looked as if nearly 1,000 members would be permanently out of jobs.

Hans Rie, Merrimac company president (right), will negotiate contracts with Amesbury Hatters Local manager, Frank Cynewski, whose members are also Merrimac stockholders

Whereupon it determined on a "rescue operation."

First step was a meeting in Rose's office with Kartiganer's principal creditors. They agreed to a percentage settlement. The union then loaned Kartiganer $50,000 and worked out an arrangement whereby each worker would advance an additional sum to his employer. For workers who lacked cash, local banks agreed to put up loans, to be repaid from payroll deductions. In all, $180,000 was raised.

Kartiganer, in turn, agreed to protect the jobs of his employees. With a new lease on life, he ultimately paid off his creditors in full, repaid the union and his employees, disposed of back Federal taxes, and during the first four months of this year made a substantial profit.

Job Gains Worth Losses

There have been other rescue operations, not all of them as successful. But in all, the union has lost only $95,000 in bad loans. Rose thinks the gain in jobs was worth the price.

Whatever their financial resources, all hat companies share one problem—a decline in the demand for their product. Hats are no less attractive than in the past, but for the past 30 years a growing number of men and women have dispensed with them. For years the union lectured the industry that the only long-term solution was to persuade Americans that, as in grandmother's day, it was downright unfashionable to appear without a hat. The most ardent propagandist for promotional efforts has long been Nathaniel Spector, the veteran leader of New York millinery workers.

The union's long crusade finally achieved its goal during the 1954 contract negotiations in New York. The union waived its demand for an additional contribution to the workers' Retirement Fund in return for a 1 percent payroll tax which employers would contribute to a promotional fund. After the New York accord, similar agreements were made with millinery manufacturers throughout the country. To administer the program, the Millinery Institute of America was created; on its board sit representatives of the union and the manufacturers, as well as wholesalers, jobbers, and suppliers who also agreed to contribute.

Nearly $1,300,000 was raised up to the end of 1958, the bulk of it being spent by MIA for national promotion and a smaller percentage allocated to local efforts. The national campaign was an imaginative public relations operation, designed to get increased "visibility" for hats in all media—movies, television, billboards, magazines, newspapers. Wherever the American female turned, she was to be beguiled by the vision of a fetching little hat on the head of some famous personality. At one point the wives of all the then 48 governors co-operated in the project; at another, pictures of both Mrs. Eisenhower and Mrs. Roosevelt, attired in stylish bonnets, appeared on the cover of a leading Sunday supplement. Elsa Maxwell and Marilyn Monroe also were photographed in hats. The results of the campaign have not been easy to estimate, but both management and labor have been sufficiently impressed to continue the program.

Union Fights "Run Away"

The union's absorption in industry problems, meanwhile, has not meant any slackening of its militancy. In 1954 it conducted a bitter 10½-month strike against the Hat Corporation of America in Norwalk, Conn. The issue, as the union saw it, was whether a company had the right to "run away"—to transfer its operations to a low-wage, nonunion area. In the end, the company, having already set up plants in two other states, promised that Norwalk would remain its center of operations and agreed to provide severance pay for workers affected by any future shifts. Whatever the merits of the dispute, the union showed an iron will in the face of financial disaster; the strike of 1,500 workers cost two million dollars.

A long period of harmonious relations followed the strike. The Hat Corporation was taken over by new owners who introduced many innovations in manufacturing methods. Says W. P. Morin, the company's director of labor relations: "The union helped us all along the line."

The Hatters have come a long way. Wages, once low, have steadily improved; today, skilled operators, blockers, and cutters often make an annual wage of $4,500 to $7,000. Equally important, the average member of the union now enjoys medical insurance plus retirement and disability, maternity, and, in many plans, death benefits. From 1946 through 1958, for example, the welfare fund of the New York industry received nearly 21 million dollars in employer contributions and paid benefits of almost 12 million dollars.

Alex Rose stated his union's remarkable position in the industry last July when he summed up the success of the Merrimac venture. "What the union has done," he said, "has been to provide continuity, capital, and confidence."

END

NEW SYSTEMS AND EQUIPMENT

"Sprayit 408" Universal Air Cleaner Cares for Office Machines on Spot

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Production of a universal air cleaner for maintenance of office machines and precision equipment was announced by the Electric Sprayit Division of Thomas Industries, Inc. The all-purpose "Sprayit 408" air cleaner was designed to solve on-the-spot appliance and business machine cleaning problems. It can be used for cleaning typewriters and other intricate office machinery and such varied products as cameras and television chassis. The "Sprayit 408" weighs 6½ pounds and has a seven-foot rubber tube to pinpoint the air stream from its ¼-horsepower compressor-motor. Thomas Industries, 410 Third St., Louisville, Ky.

Nylon Post Binder Opens Flat, Contains No Outside Mechanisms

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To solve the problem of storing the increasing amount of records produced by modern data processing systems, a modern type of binder has been developed especially for machine tabulated forms. Unlike earlier binders (above) which hid entries close to the margin, the new binder allows sheets to lie flat so that all entries can be read. With the nylon post binder (below), it is the post that bends, not the pages. It also contains no outside metal locking mechanisms to prevent binders from being stacked level, one on top of another. Wilson Jones Company, 209 S. Jefferson, Chicago 6, Ill.

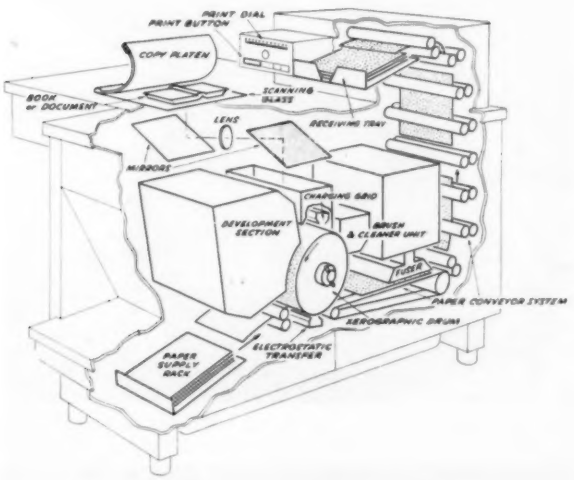
General Purpose Accounting Machines Designed to Fill Bookkeeping Gap

←

A complete new line of automatic accounting machines, the Series F5000, has been developed by Burroughs Corporation. Designed for all types of businesses, the general purpose machine is the first fully automatic mechanical accounting device equipped with a "dual printer." This feature is reported to increase operating speeds by as much as 50 percent. The new device, a numeric data processing accounting machine, is designed to fill the middle ground between a company's small portable bookkeeping machines and high speed electronic data processing equipment. All models will be equipped with a "program panel" that controls the automatic functions of the machine. Burroughs Corporation, Detroit 32, Mich.

Recording-Reproducing Device Speeds Teletype Handling

A new electronic voice recording and reproducing machine designed to increase speed and efficiency in the handling of outgoing Teletype messages has been announced by Dictaphone Corporation. Known as the Dictaphone Telegram Recording-Reproducing Machine, the device has been developed for use by business and government organizations whose day-to-day operations require volume transmittal of messages over Teletype circuits. Located in the organization's Teletype center, the machine permits an executive to pick up his phone and dictate the message. The machine consists of two recording-reproducing units so arranged that the teletypist can transcribe on the teletypewriter the messages recorded by one of the units while the other continues to record messages. Dictaphone Corporation, 420 Lexington Ave., New York, N. Y.



SCHEMATIC DIAGRAM – XEROX 914 COPIER

Haloid Xerox Push-Button Copier Is Similar to Short-Run Duplicator

A new push-button copier has been designed that requires no sensitized or treated papers and needs no exposure or developing adjustments. With a Xerox 914 Copier, the operator can make any number of maximum quality copies on ordinary paper by dialing the number desired and pushing a button. The first copy is delivered in 30 seconds, succeeding copies emerge at the rate of six a minute. The entire operation is performed without handling the copy paper or rehandling the original for multiple copies. In this respect, the machine is similar to a short-run duplicator rather than to the conventional copier. The 914 operates on the electrostatic principles of xerography. Prints may be made directly on ordinary white or colored paper, offset paper master material, card stock, or vellum. Haloid Xerox Inc., Rochester 3, N. Y.

Three New Models Join "addo-x" Line; Measure Hours/Minutes, Feet/Inches

Three new models have been placed in the "addo-x" line of adding, posting, and calculating machines. The Model 441-30 (shown at the right) is a three-position shuttle carriage adding machine with two separate "down total" registers and split motor bars for vertical and horizontal postings. It can serve as a statement and billing machine using numeric codes for commodity description, or for other types of listing and column work where there is a need for two numbers and an amount, or one number and two amounts. Another new "addo-x" product is the Hours/Minutes machine, which will have applications to plants where accounting in terms of time is important. Air lines, for example, will find such a machine useful for figuring flying time of their crews and planes. The Feet/Inches machine, which can be used for figuring dozens and units, gross and dozens, or shillings and pence, has applications in steel manufacturing plants and steel supply houses, lumber yards, garment industries, banks, exporters and importers, and other places where the basic unit quantity is divided into 12 equal parts rather than 10. addo-x inc., 300 Park Ave., New York 22, N. Y.

DON'T MISS GETTING

The literature recommended below has been selected by the editors for its usefulness to management executives. Requests for this material, which is free unless otherwise noted, should be sent directly to the companies listed. Prompt action is suggested; supplies of such material are usually exhausted within a few months.

A SCIENTIFIC TOOL, yet one that is simple to use, can aid management in assessing the interrelationship among sales volume, margins, and costs. Known as the Break-Even Analysis, this tool is described in the 12-page article "Break-Even Point Studies for Management." This article shows how management can establish performance objectives, determine price policy, negotiate wage contracts, appraise distribution policies, and assess capitalization and expansion decisions. Also noted is the case history of a company that used the Break-Even Analysis to control its bonus plan. The article, which includes a one-page summary, is available from Berke-Kimball Associates, Chamber of Commerce Bldg., Brooklyn 1, N. Y.

* * *

COMPANY TREASURERS WILL FIND ways to make their annual reports more visually interesting by writing for some of the publications offered in the 24-page bibliography, "Telling Your Shareownership Story." These publications tell how other companies have used glossaries of financial terms and articles on how to read an annual report. The pamphlet also lists publications that executives can order for ideas about public relations, stock plans and reports for employees, and information about the New York Stock Exchange. This catalog of available publications may be obtained without charge from the New York Stock Exchange, 11 Wall St., New York 5, N. Y.

* * *

A PLAN TO INCREASE productivity through incentives is outlined in "A New Approach to Higher Productivity and Improved Labor Cooperation." This 15-page booklet shows how factory payrolls are directly proportionate to factory production value. It also lists the cost of labor (about 39.4 percent of production value for all enterprises) in 20 selected industries. The publication is available free from the Eddy-Rucker-Nickels Co., 4 Brattle St., Cambridge 38, Mass.

* * *

A USEFUL HANDBOOK FOR SMALL businesses published by Dun & Bradstreet outlines the causes of success (and failure) among the Nation's 4.3 million small enterprises. The 48-page illustrated booklet is entitled "Profitable Management for Main Street" and is available at $1 a copy. Especially valuable is the index of operating ratios—cost of goods, itemized expenses, and operating profit—for 41 types of retail trade. Helpful hints for buying, selling, keeping records, and other problems are included. Another available booklet is "The Failure Record Through 1958," a 15-page analysis of why 14,964 businesses in the United States failed last year. Single copies are free. Both publications may be secured from Dun & Bradstreet, Inc., 99 Church St., New York 8, N. Y.

* * *

"OFFICE COPY MACHINES and How to Choose the One to Suit Your Needs" is the title of a free brochure that examines the main features of the six office photocopy processes in general use today. The six methods—diazo, dye-transfer, infrared, silver transfer, monobath, and "Quick Silver"—are discussed with respect to print quality, speed, convenience, and economy of operation. The bulletin recommends the best process to use for specific copying problems, such as handling a wide variety of originals, applications where speed is most important, or those where it is desired to make multiple copies from the same originals. Send your request to Peerless Photo Products, Inc., Shoreham, Long Island, N. Y.

* * *

TELEPHONE SERVICE planning is described in a new Bell System booklet, "Telephone Planning for Modern Commercial Buildings." The 22-page illustrated brochure is designed for architects, builders, financiers, and building owners. It contains a step-by-step review of what is needed in the preliminary stage of construction to provide a modern, flexible communications setup. The booklet explains that telephone planning should start at the drawing board, especially if provisions are to be made for such features as improved dial systems, speakerphones, telephone answering sets, and concealed wiring. Free copies may be obtained from American Telephone and Telegraph Co., Room 510-C, 195 Broadway, New York 7, N. Y.

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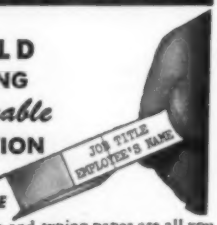

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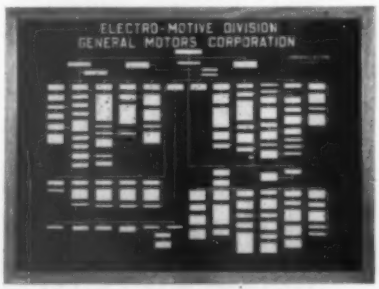

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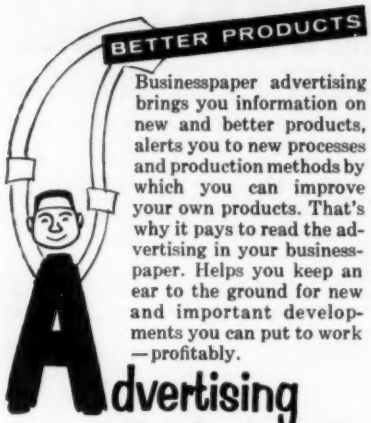

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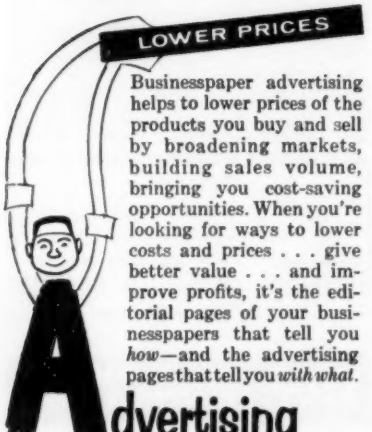

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NEW BOOKS FOR EXECUTIVES

THE OFFICE SUPERVISOR. *By Henry E. Niles, Mary Cushing Niles, and James C. Stephens.* This is a third edition, with numerous alterations and revisions throughout. Text is based on conferences with hundreds of supervisors, on practical experience, and on wide scholarship.

Chapters are short and factual. For instance, Chapter Two, "The Office Setting," covers the effects of office automation in its five pages. The authors list 11 points where automation affects the office supervisor or those persons with whom he must deal.

Another effective chapter, "Dealing With Superiors," gives the office administrator solid tips on how to improve his communications role, better present ideas to superiors by using certain principles for getting suggestions adopted, and realize more fully the importance of organized presentation.

The authors offer an up-to-date picture of how organization and human relations determine the pattern of supervision. They spell out by example how more co-operation can be expected when people are treated as partners and participants in a joint undertaking. This, we believe, many office administrators need to know.

Even if you have the original edition, published in 1935, and have followed its recommendations closely for years, you will find this new edition will bring you that much closer to today's trends and pace of changes in office administration. *John Wiley & Sons, Inc.,* 440 *Fourth Ave., New York* 16, *N. Y.* 310 *pp.* $5.95.

E.M.R.

HOW TO GET WHAT YOU'RE WORTH. *By O. J. McClure.* "Ninety-one percent of the best salesmen are teachable—so reported by their bosses," is the author's premise. And from his lifetime of experience in selling and in teaching salesmanship, Mr. McClure has put together 33 lessons that can help a salesman, no matter what his line, increase his earnings.

Every precept is backed up with examples of how salesmen made sales by following it or lost orders by ignoring it. To bolster the salesman's confidence, the author explodes some popular myths that hold a salesman back: the idea that there are "born" salesmen; that there is one best way to sell any product or service; that conditions are against him; that a cordial reception indicates a hot prospect.

One of the most encouraging sections of the book stresses individuality in selling. The author is convinced that each man should sell in his own way and that the method that works for one salesman may be unsuitable for another.

A seldom discussed aspect of salesmanship gets a thorough going-over: the "pre-approach." How the salesman approaches the prospect can make or break a sales talk. The author shows how a number of salesmen increased their sales by concentrating on the pre-approach.

Canned sales talks, their pros and cons; how to sell to women; mannerisms that annoy buyers; and taking prospecting as a challenge instead of a dreaded task are among the other interesting and helpful topics included.

Perhaps the most valuable section deals with organizing the sales talk according to the 4 "P's": (1) Start with the buyer's *problem* and how your commodity will solve it; (2) show the *performance* of your product; (3) tell about the *product,* its quality and special features; (4) quote *price,* after the buyer has been shown that the product's quality and usefulness warrant it.

Any salesman who is willing to be taught how to do a better job can profit from this book. Applying its principles can mean the difference between just getting by and getting ahead. *Vantage Press, Inc., New York* 1, *N. Y.* 184 *pp.* $3.95.

M.C.

UNIONS AND UNION LEADERSHIP: THEIR HUMAN MEANING. *Edited by Jack Barbash, Professor, Economics Dept., University of Wisconsin.* Whatever other adjectives may be applied to this book, no one can quibble with the adjective "timely." A symposium by men of such divergent points of view as officials of the National Industrial Conference Board and those of the more militant unions should be of informative value to every business and industrial executive who has direct or indirect contact with union problems—and who, today, has not?

Subjects discussed in this book range from the personalities of leading union leaders to the structure and operation of the larger and smaller unions; sources range from *The Nation* and *New Republic* to *Business Week, Newsweek,* and the *New York Times.* A number of the articles are drawn from scientific journals—perhaps a disproportionate number, but this is to be expected in

a symposium on a subject that is of major interest to economists and sociologists.

While it is probable that most readers will have already seen one or more of the articles included in this book, it is unlikely that all will be familiar, especially in the juxtaposition afforded in this book. All in all, the collection makes both timely and worth-while reading. *Harper & Brothers, New York* 16, *N. Y.* 348 *pp.* $6.00. L.L.L.

THE EXECUTIVE SECRETARY. *By Marilyn C. Burke.* Any executive who wants his secretary to increase her efficiency—and perhaps improve his in the process—will do her a favor by recommending this book. Capping some 16 years' secretarial experience, Miss Burke now is secretary to Mrs. Dale Carnegie, after serving as the late Mr. Carnegie's secretary.

Differing from the usual secretarial handbook, Miss Burke's advice places prime importance on the intangible qualities a good secretary needs. Going further, the author shows how to develop the discretion, ability to get along with people, initiative, and other traits executives look for in their assistants. Only after these aspects have been covered does she include the technical aspects of the secretary's work.

The book is written as though Miss Burke is having a heart-to-heart talk with the reader, and it is liberally sprinkled with examples of the right and wrong ways to handle any business situation or task. Particularly useful are the section on "The Secretary as a Business Personality" and two chapters on subjects usually avoided by less intrepid writers: "Don't Miss with Mrs." and "All About Romance." More practical advice on getting along with the boss's wife and avoiding romantic attachment to the boss has yet to be written.

The book is a sound investment for the secretary who aims to make herself indispensable. *Doubleday & Company, Inc., New York* 22, *N. Y.* 216 *pp.* $3.95 M.F.

Briefly Noted

THE EXECUTIVE TIME SAVER. *By N. H. Schlegel.* This new profit pricing and cost control handbook for management personnel can be described as a slide rule in print. It provides management, marketing, and sales executives with answers to problems of calculating profit margins, markup percentages, sales prices, and distribution discounts. Developed by the vice-president in charge of marketing at Cory Corporation, the book is the result of his experiences in needing rapid and accurate information with which to make decisions. *CMI, Inc.*, 542 *S. Dearborn St., Chicago* 5, *Ill.* 50 *pp.* $7.50.

MEASUREMENT AND EVALUATION OF ORGANIZATIONAL PERFORMANCE. *By Paul Wasserman.* This annotated bibliography, prepared under the auspices of the McKinsey Foundation for Management Research, is an excellent reference work for the executive's desk. It lists some 400 books, articles, and documents on the subject of evaluating administrative performance and contains a short resume of each. These writings deal with measurement of the total enterprise (both business and nonbusiness), functional units, and individual performance. The book directs the executive's need for data to informed sources. *Graduate School of Business and Public Administration, Cornell University, Ithaca, N. Y.* 110 *pp.* $3.75.

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Statement required by the Act of Congress of August 24, 1912, as amended by the Acts of March 3, 1933, and July 2, 1946 (Title 39, United States Code, Section 233), showing the ownership, management, and circulation of AMERICAN BUSINESS, published monthly at Chicago, Illinois, for October 1, 1959.

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C. F. JOHNSON

Sworn to and subscribed before me this 8th day of September 1959. PAUL B. SOBOLEWSKI, *Notary Public* (My Commission expires Feb. 3, 1962).

[SEAL]

BUSINESS ON THE MARCH

Enemies, Real and Imagined

The "war" against inflation has generated enough emotional fervor to obscure the real nature of the enemy. Thus, some of the attackers are shooting in the wrong direction and even at the wrong troops. The Senate's "Price Notification Bill" is a good example.

This bill would require what it describes as "dominant corporations" in certain "heavily concentrated" industries to give the Federal Government a 30-day notice in writing should they desire to raise prices on any of their products. The Federal Trade Commission and the Department of Justice would then require the company to justify its price actions at a public hearing, producing all the books and records the Government may regard as necessary.

Many grand illusions befog the thinking behind this bill. One especially merits attention because it misleads many, many people. In confining itself to products, the bill ignores the major pressure forcing increases in the cost of living: services—medical care, rent, transportation, repairs, haircuts, and so forth. A careful study of the "Consumer Price Index" by Professor Richard Ruggles of Yale revealed that in the five years following 1951, the price of products had risen only 2 percent while the price of services had climbed 21 percent. And most economists agree that the cost of services will continue to increase because of the relatively low productivity (haircuts and repairs can't be mass produced) and the pressure of wage increases in other industries.

It would be a much better idea for legislators to probe the question that economists and marketing men desperately want answered: How reliable a thermometer of the cost of living is the "Consumer Price Index"? The answer would tell us how much true inflation we really have, which might be a lot less than some people feel.

Not Enough Morons

What has happened to the wave of job-enrichment programs that seemed to be forming a half-dozen years ago? Little has been heard of the movement recently, although experience has demonstrated the wisdom of developing employee participation and avoiding unnecessary specialization.

Much more progress has to be made on reversing the trend to so-called "scientific management"—decentralizing rather than centralizing, increasing the significant content of jobs rather than subdividing them further, harnessing group solidarity rather than trying to break it up, putting more satisfaction into the job situation rather than expecting workers to find it outside their jobs; in short, making it possible for workers to utilize their capacities more fully and thus truly earn their keep.

During World War I an Italian knitting mill employed 24 girls from a mental institution, their mental age ranging from six to 10 years. They did so well that they were kept on after the war. Trouble is, there just are not enough morons to go around.

Birth Pangs and Benefits

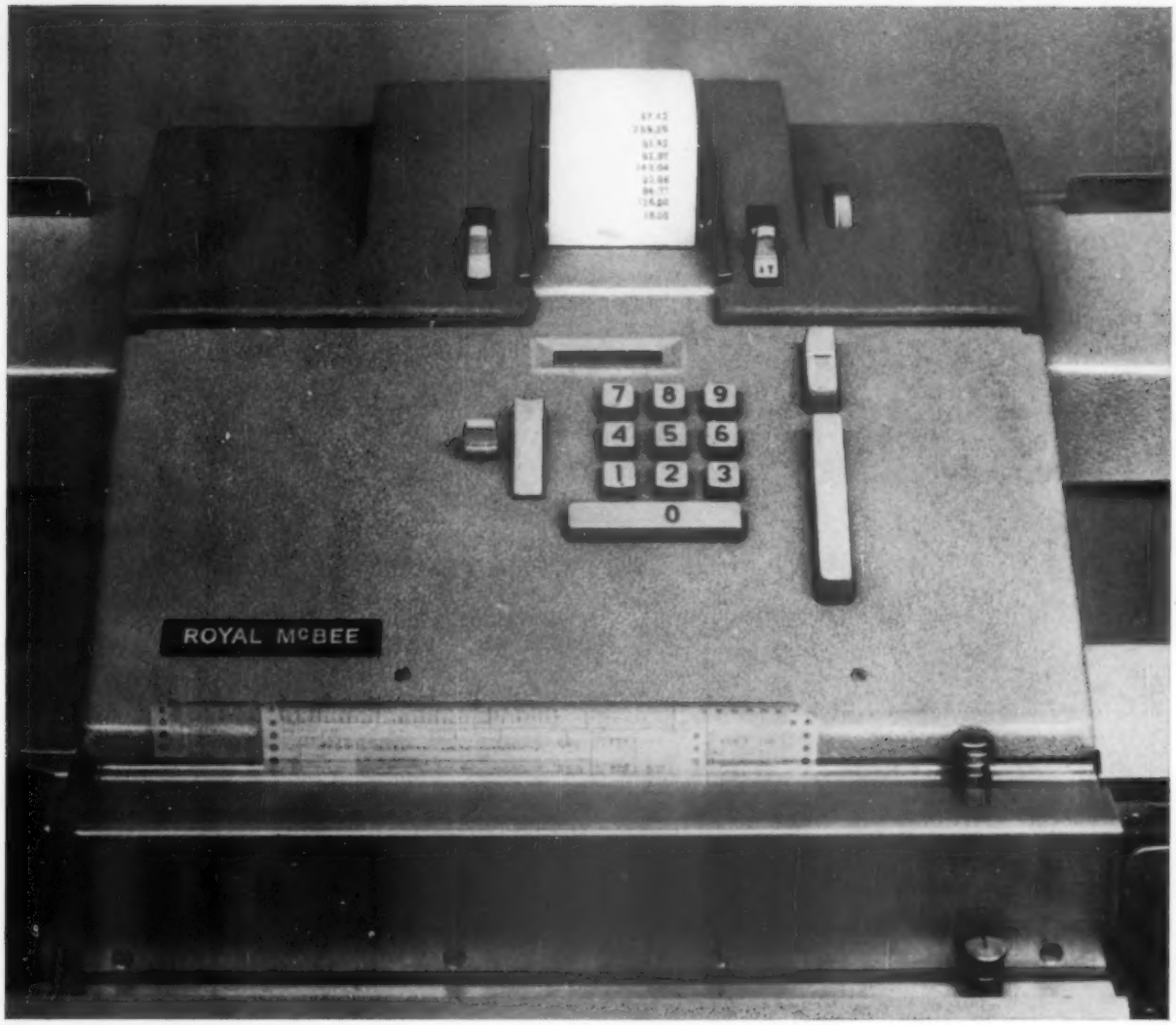
A friend of ours, a consulting engineer, did some work for a company a few months ago, submitted his bill, and waited such a long time for payment that he wrote a gentle note of protest. A week or so later he received a check, accompanied by a printed form that explained the delay was caused by the company's conversion of its accounts payable to electronic data processing and printing equipment. "Chaos ensued," the company confessed.

Our friend was not convinced that was really the reason for the delay. Good excuse, maybe, but no valid reason for any company to delay converting to well-designed automated office procedures and equipment. There is a certain amount of pain and turmoil incident to any change. Benefits, not birth pangs, are the major consideration.

Can You Recognize a Fireball?

George Romney, who has his American Motors really rambling along, once worked for a large corporation. He quit. "As near as I could figure it," he is quoted as saying, "I would have been about 90 years old by the time I reached the top."

His employer had failed to convince at least one genuine fireball that he had a real future. Does your company provide a real opportunity for some still-unrecognized Romney? And does he realize it? What techniques are you using to identify such men and accelerate their growth in your company?



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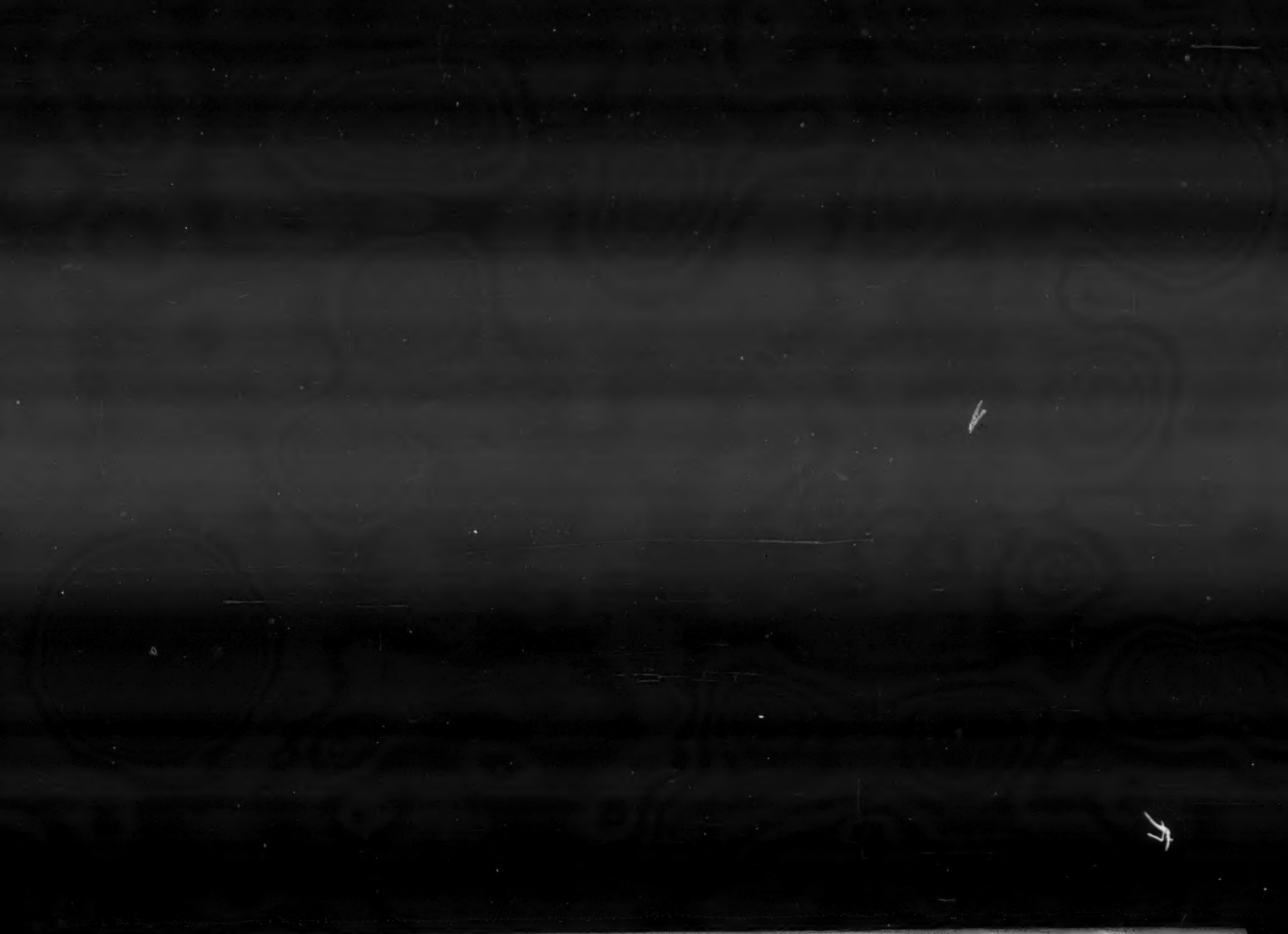
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